DOCUMENT RESUME

ED 322 065 SO 030 098

TITLE	Geography in the Middle School: A Compendium of Lesson Plans for Social Studies and Other Subject Areas.
INSTITUTION	Maryland Geographic Alliance, Baltimore.
SPONS AGENCY	Maryland State Dept. of Education, Baltimore.
PUB DATE	90
GRANT	031402-01
NOTE	76p.
AVAILABLE FROM	Maryland Geographic Alliance, University of Maryland Baltimore Campus, Geography Department, 5401 Wilkens Avenue, Baltimore, MD 21228 ($5.00).
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Educational Resources; *Geography Instruction; Instructional Materials; Intermediate Grades; Junior High Schools; *Maps; Middle Schools; Social Studies; Visual Aids

ABSTRACT

The geography lesson plans included in this packet of materials were prepared for middle school students. Lessons are divided into three categories according to the present school social studies curriculum: world cultures, United States history, and interdisciplinary focus. The lesson plans incorporate the five fundamental themes of location, place, human/environmental interaction, movement, and region. They are designed to provide the student with the skills necessary to prepare maps, tables, graphs, and an organized, coherrent written or oral presentation. In addition, the lessons teach interpretation of trends portrayed on a line graph and the analysis of the relationships between information on two or more maps. The students also learn to develop and test hypotheses and make geographic generalizations. Maps, graphs, charts, and other reproducible visual aids are included. (NL)

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GEOGRAPHY IN THE MIDDLE SCHOOL

A Compendium of Lesson Plans for Social Studies and Other Subject Areas

SO 020 098

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Prepared by:
Maryland Geographic Alliance

1990

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GEOGRAPHY IN THE MIDDLE SCHOOL

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INTRODUCTION

> For the United States to cope successfully with its own domestic problems and to participate effectively in world affairs, its leaders and citizens must have a coherent understanding of the earth's regions and peoples. In the United States, most educational programs today have failed utterly to provide such a structured knowledge of the world. To counteract the prevailing geographical illiteracy, major changes need to be made in pre-college programs and in technical and professional training... (The Geography in Liberal Education Project Report, Association of American Geographers, Geography in Undergraduate Liberal Education, Washington, D.C., 1965, p.1)

Changes are being made to address the issues noted in this passage written more than 25 years ago. In 1983 geographic educators from the National Council of Geographic Education and the Association of American Geographers met to establish guidelines for geographic education. The National Geographic Society began to develop state alliances of teachers and professional geographers to work to strengthen geographic education in grades K-12. In addition state and local school systems throughout the country are working to revise curricula to reflect a stronger geographic emphasis. The geography lesson plans presented here are part of this process of enhancing geographic education.

These lessons have been prepared for students in the middle learning years. In 1989, the Maryland Task Force on the Middle Learning Years published its report, What Matters In the Middle Grades. Its recommendations for specific curricular focus areas included an emphasis on geography in social studies. Subsequently, state funding was allocated for the development of model curricular units of instruction integrating geographic content and skills into social studies and other subject areas.

The lessons are divided into three categories according to the prevailing middle school social studies curriculum: world cultures, U.S. History, and interdisciplinary focus. All lessons incorporate the fundamental themes of geography: location, place, human/environment interaction, movement and region. The fundamental themes of geography were developed in 1984 by the Joint Committee on Geographic Education. They represent a structure that is supported by professional geographers and teachers in the United States and other countries. While location and place provide the foundation for observation in geography, human/environment interaction, movement, and regions provide the framework for geographical analysis. Since the themes are closely related, one or several may be explored in any geographic study.

The lessons also incorporate geographic skills that require asking the right kinds of questions and being able to use geographic data in answering those questions. The geography skills, as outlined by the Joint Committee on Geographic Education in their publication Geography in Grades 7-12: Themes, Key Ideas, and Learning Outcomes, are listed below:

Asking Geographic Questions
Geography is distinguished by the kinds of questions it asks--the "where?" and "why there?" aspects of an issue or problem. It is important for students to develop and practice skills in asking such questions and researching answers or suggestions that offer an explanation to these questions.

Acquiring Geographic Information
These skills include identifying locations using grid systems, making observations and acquiring information in the field, and obtaining and organizing geographic information from maps, tables, graphs and photographs.

Presenting Geographic Information
These skills involve an ability to prepare maps, tables and graphs and make an organized coherent written or oral presentation.

Interpreting and Analyzing Geographic Information
Interpreting and analyzing involves the ability to discover what a particular map, table, or graph says or implies about the question or issue being investigated. This includes interpreting trends portrayed on a line graph and analyzing the relationships between information on two or more maps.

Developing and Testing Hypotheses and Geographic Generalizations
Skills in this area require an ability to make inferences based on information presented on maps, tables and graphs, and in narrative form. It includes the ability to test hypotheses regarding patterns and to extend the observation of recurring patterns to general statements.

This project was funded by the Maryland State Department of Education (Grant No. 031402-01). Lessons were prepared by Maryland middle school teachers, members of the Maryland Geographic Alliance and Jan Valdez and Sari Bennett of the Department of Geography, University of Maryland Baltimore County. We wish to thank Peggy Altoff, State Specialist in Social Studies, for reviewing and commenting on these lesson plans. Maps were produced by Dr. Charles Christian of the Department of Geography, University of Maryland College Park, and Joseph School, Melanie Orwig and Jay Sandburg of the University of Maryland Baltimore County Office of Cartographic Services.

Lesson plans may be copied without permission for classroom use. Additional copies are available from the Maryland Geographic Alliance, UMBC-Geography Department, 5401 Wilkens Avenue, Baltimore, MD 21228, (301)455-3148 or the Maryland State Department of Education, Division of Instruction, 200 West Baltimore Street, Baltimore, MD 21201, (301) 333-2326.

Fundamental Themes for Geographic Education

Location: Position on the Earth's Surface

Absolute and relative location are two ways of describing the position of places on the earth's surface. In many situations it is important to identify absolute locations as precise points on the earth's surface. For instance, determining the precise position of fresh water supplies is critical to filling the world's fresh water needs. Determining relative location, the position of one place with respect to other important places, is equally significant. If, for example, the position of fresh water supplies with respect to potential water users is too remote, then it will not be feasible to use those supplies.

Place: Physical and Human Characteristics

All places on earth have distinct physical and human characteristics that give them meaning and distinguish them from other places. The physical characteristics derive from the geological, hydrological, atmospheric, and biological processes that produce landforms, water bodies, climate, soils, natural vegetation, and animal life. Human ideas and actions also shape the character of places. Places differ in their population size and density, as well as in their settlement patterns, architecture, kinds of economic activities, and transportation and communication networks. Places can be distinguished from each other by the ideologies and philosophical or religious tenets of people who live there, by their languages, and by their forms of economic, social, and political organization. Taken together, the physical and human characteristics of places provide keys to identifying and interpreting both basic and complex interrelations between people and their environments, and between and among different groups of people.

Human/Environmental Interaction

All places on earth have advantages and disadvantages for human settlement. High population densities have developed on floodplains, for example, where people take advantage of level land, fertile soils, water resources, and opportunities for river transportation. By comparison, population densities are usually low in deserts. Yet floodplains are periodically subject to severe damage, and some desert areas have been modified to support large populations.

People modify and adapt to natural settings in ways that reveal their cultural values, economic and political circumstances, and technological abilities. The resulting human-environment relationships have consequences for people and for the environment which produce a worldwide mosaic of patterns dependent upon culture and environment. Each place has its distinctive patterns of human-environmental relationships.

Movement: Humans Interacting on the Earth

Human beings are unevenly distributed across the face of the earth. Some live in rural areas and others live in towns, villages, or cities. People interact with each other through travel and communications between and among places. They rely upon products, information, or ideas that come from beyond their immediate environment.

The most visible evidences of global interdependence and the interaction of places are the transportation and communication systems that link the world. These systems are used to help people interact with other people and places almost every day of their lives. Interaction changes as transportation and communication technologies change. The geographical and societal changes that come about are an important result of the movement of people, ideas, and products.

Regions: How They Form and Change

The basic unit of geographic study is the region. A region is any area that displays unity in terms of selected criteria. Regions may show the extent of political power, such as nations, provinces, countries, or cities. Some regions are defined by a single characteristic, such as the governmental unit, language group, or landform type; others by the interplay of many complex features.

Region is a concept used to examine, to define, to describe, to explain, and to analyze the human and natural environments of the Earth. There are numerous ways to define meaningful regions, depending on the issues or problems being considered.

Regions provide a context for studying contemporary issues and current events. They may be an intermediate step between our knowledge of local places and our knowledge of the entire planet. Regions are used in many ways in geographic education. They define convenient and manageable units upon which to build our knowledge of the world.

Taken from Grades 7-12: Geography, Themes, Key Ideas, and Learning Opportunities, by the Geographic Education National Implementation Project, 1989.

Lessons Relating to World Cultures

Shirts, Shoes, and Watches: An Exercise in Global Interdependence

GRADE: 6-8

SUBJECT: World Cultures

GEOGRAPHY THEMES: location, place, movement, region

DURATION: 1-2 class periods

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Presenting Geographic Information, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: imports, exports, balance of payments

OBJECTIVES: Students will:

1. compile data about where various products are produced
2. map the location of the producing countries
3. make generalizations about how Americans are connected to other places in the world by the products we buy
4. calculate the value of imports and exports of the U.S. and determine balance of trade

MATERIALS: Table of U.S. imports and exports; world maps, post-it notes (or index cards and tape)

LESSON DEVELOPMENT:

Review and Motivation:

1. Make a transparency of the table of import and export figures or write the table on the chalkboard. For this part of the activity, cover the export column. Ask the students from which countries does the United States purchase the most goods? What products do we purchase from these countries? Emphasize how places in the world are interconnected by trade.

2. Tell the students that they are going to gather data about the countries that produce the clothing items they are wearing. By the end of the activity they will understand how dependent they are on other places in the world.

Activities:

1. Hand out blank world maps to each student.

2. Ask each student to pair up with a fellow student. Working as a team, check where each other's shirt/sweater/jacket was manufactured. Have each student label that place on their world map. Make a world reference map available for students to check locations.

3. Next, have students check where their shoes were manufactured. Double check location here--just because there is a Union Jack on the sneakers does not mean they were made in the United Kingdom. Have each student label that country on the world map.

4. Continue this procedure for checking for the location of student's watches. Label these locations on the map.

5. When students have gathered their data, have each write the country of origin for the shirt on one post-it note or card, the country of shoe production on another, and the country that made the watch on the third. Construct a frequency distribution graph for

each product by having students come to the front of the room and post their notes along a base line drawn on the blackboard. For example,

Countries that Produce Shirts

US	Hong Kong	Korea	Taiwan	Mexico

Students will add each note to the column above the producing country. Add more countries along the base line as necessary. Make a bar chart for each product.

5. Ask students to analyze the bar charts. What countries do we buy most of our shirts from? our shoes? our watches? Can they suggest any reasons as to why the countries produce these products? Note that "shirt" countries often have cheap labor that helps lower the cost of manufacturing the product. "Shoe" countries might be major cattle producers and therefore have an advantage in acquiring leather. "Watch" counties generally have well developed manufacturing economies. Are there any countries that appear on more than one chart? Why?

6. Have the students take their world maps and add all the other countries that produce the shirts, shoes, and watches owned by class members. Ask students to make a general statement about which parts of the world they are most interconnected with based on these items of clothing. Are there any places in the world that are not represented? (Eastern Europe, the Soviet Union, Africa, Australia, and Canada are frequently not represented.) Can the students suggest any reasons why the U.S. does not buy items from those areas? (Australia is too far away; the Soviet Union does not make any of these products or we do not trade with them because of political issues; nations of Africa are still basically agricultural and produce few manufactured goods; Canada produces lumber and exports minerals.)

Conclusion:

Go back to the table of trade statistics. Uncover or add the export figures. Does the U.S. have a trade advantage (sell more than we buy) with any of its major trading partners? Ask students if they know what the United States sells in return for these products (grain, automobiles, machinery, chemicals, coal). Ask the students to add the column of import and export figures. Does the U.S. buy more than it sells? What does this mean for the American economy?

EVALUATION:

1. Ask how political changes in Eastern Europe might change the trade patterns depicted on students maps, bar charts, and the table of statistics?

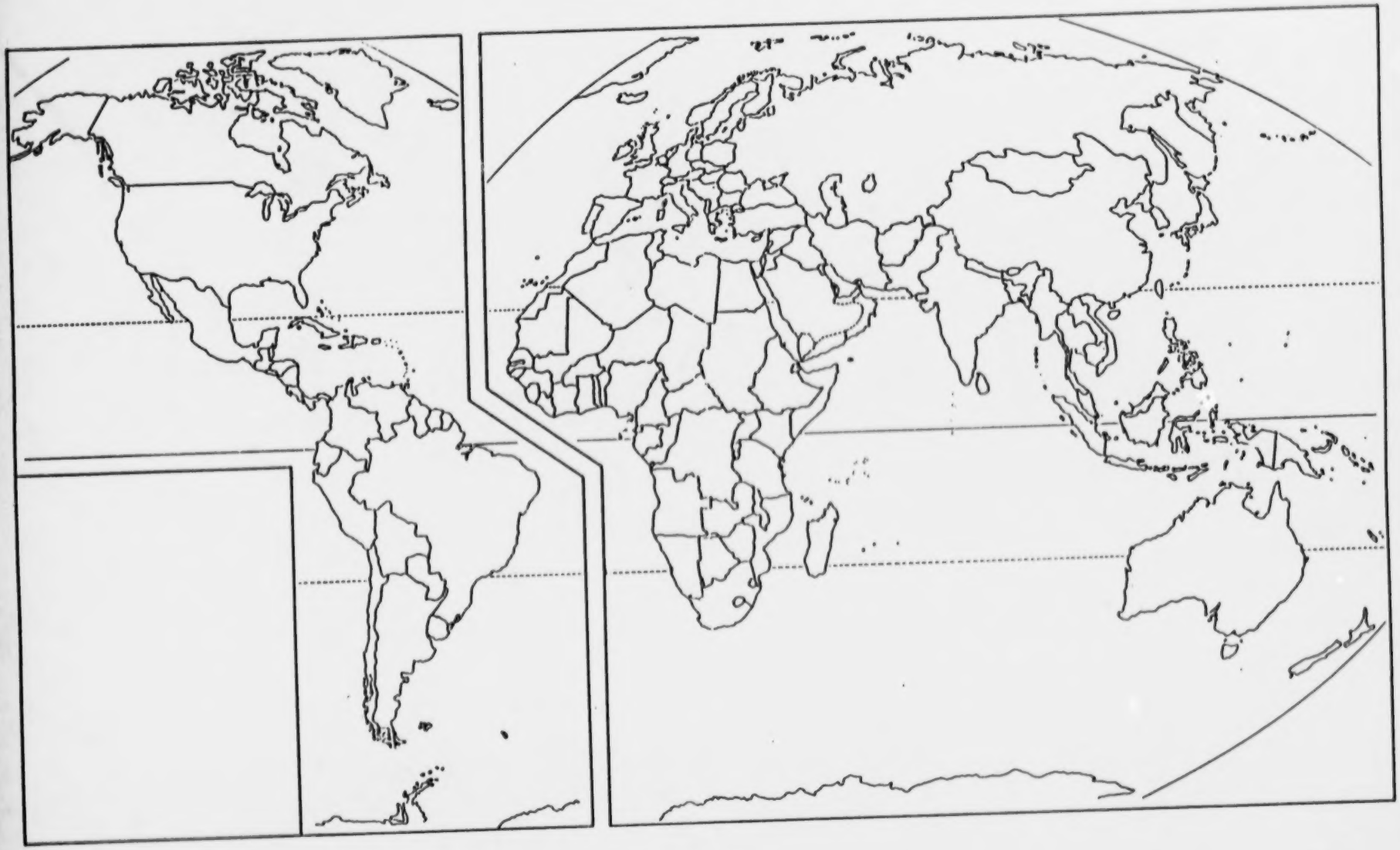
2. Discuss the possible long term effects of continued trade imbalances with the nations listed on the table of trade statistics.

Adapted from an activity developed by James Kracht, Texas A & M University.

FOREIGN TRADE FIGURES FOR THE UNITED STATES, 1987

Country	Value of Imports (millions of dollars)	Value of Exports (millions of dollars)
Japan	84	28
Canada	71	60
West Germany	27	12
Taiwan	25	7
Mexico	22	15
South Korea	17	8
United Kingdom	17	14
Italy	11	6
Brazil	8	4
Saudi Arabia	4	3

Source: U.S. Bureau of the Census, "Highlights of U.S. Export and Import Trade," 1987.



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Traveling the Grand Trunk Road

GRADE: 6-8

SUBJECT: World Cultures

GEOGRAPHY THEMES: movement, place, location

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: the Grand Trunk Road

OBJECTIVES: Students will examine an experience from a variety of perspectives.

MATERIALS: Newspaper article "Road Kings Truck Across India," from The Washington Post, Oct. 28, 1989; wall map or atlas

LESSON DEVELOPMENT:

Review and Motivation:

1. Using a wall map or atlas have students locate New Delhi and Calcutta and calculate the distance between them. (800 miles) If goods were moved by truck this distance in the United States about how long would it take? (Traveling about 50 miles per hour, a day and a half to two days)

2. Have students suggest problems that a truck driver in the United States might have traveling from Baltimore, Maryland to Chicago, Illinois.

Activities:

1. Have the students read the first nine paragraphs of the article and discuss how long the trip between New Delhi and Calcutta normally takes and the various problems encountered along the road. Refer to attached map.

2. Divide class into cooperative learning groups and assign each group one of the following roles: truck driver, truck driver's assistant, reporter, inspector, villager.

a. As students read the article have each group try to gain an understanding of the impact of the road from the perspective of the role each has assumed.

b. Have each group report on how the road affects their lives, the dangers they experience, and their feelings about the road.

c. Have each group select three words that best describe the experience from the perspective of the role they have assumed.

3. Have students consult a variety of maps of India (temperature, rainfall, climate, resources, language, etc.) and describe the regions through which the Grand Trunk Road passes.

Conclusion:

As a class, discuss the importance of the road and what it would mean to various groups if the road were shut down or replaced by a railroad.

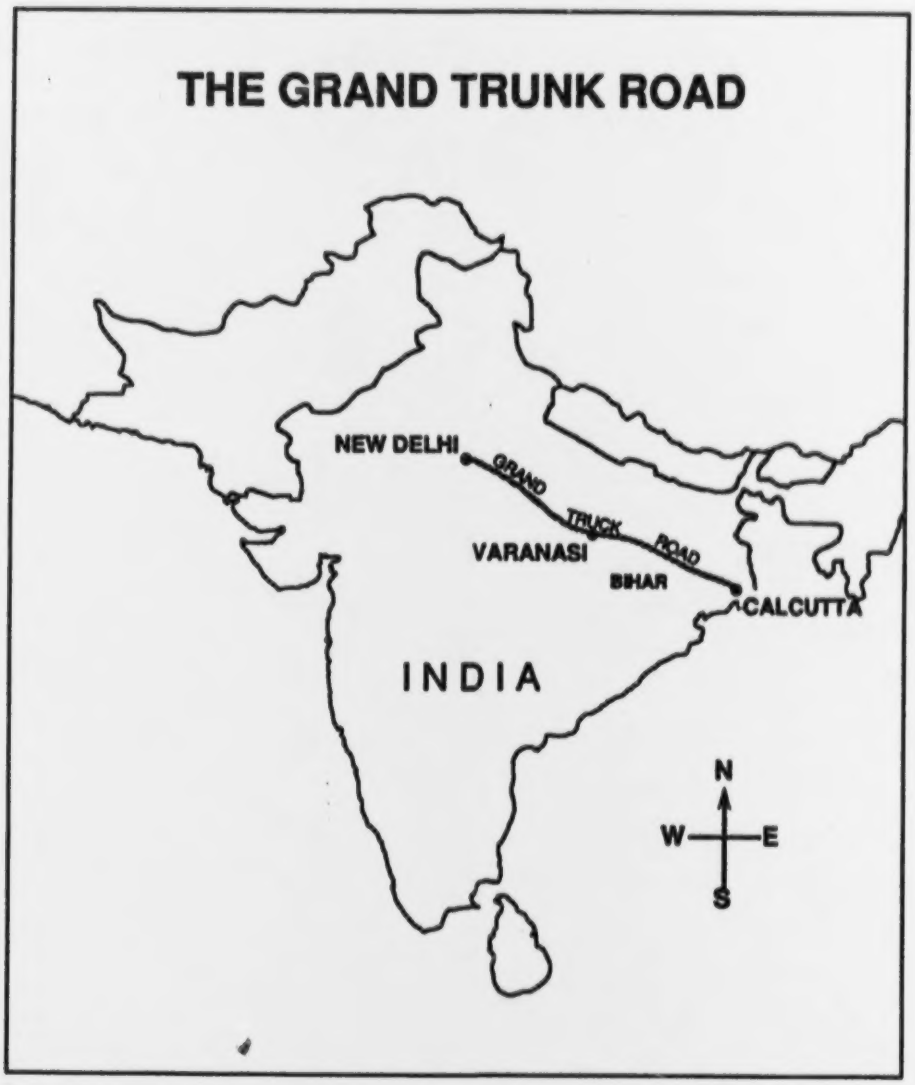
EVALUATION:

Discuss how the road could be improved to make it safer and faster and the possible impacts of such improvements on individuals and groups.

RESOURCES:

For additional information and pictures of the Grand Trunk Road see, National Geographic Magazine, Vol. 177, No. 5, May 1990, pp. 118-138.

Adapted from a lesson by Carolyn Scholl.



'Road Kings' Truck Across India
Daring Drivers Live Dangerously on Ancient Highway
by Steve Coll
Washington Post, October 28, 1989 A1
(condensed version)

Aligarh, India-For six hours, Bhajan Singh weaved his 10-ton truck down the night road, swerving through dust and diesel smoke, blasting his horn to overtake cows, taxis, camel carts, motorcycles, ducks and pedestrians.

He managed not to hit anything, and soon paused to rest beside the moonlit highway. He hoped to sleep until dawn, he said, then roll on toward Calcutta.

A Sikh with a long black beard, 32-year old Bhajan Singh has lived on the Grand Trunk Road, India's most famous highway for 12 years. Sometimes, he said, he wonders if he has been there too long. Three times each month he dodges traffic accidents, bandits and angry villagers to make a five-day run from New Delhi to Calcutta--one of the oldest trading routes in the world--hauling cloth, garments, wool and whatever else his company tells him to load in his six-wheel Tata truck.

"When I compare the home life with the road life, I know the home life is better," he said, slapping mosquitoes. "But what choice do I have? I will drive until my body quits. I don't know any other work...The road is my house."

And then, smiling and gesturing to the trucks parked around him in the dark: "We are the road kings."

Daring and reckless behind the wheels of their massive vehicles, India's truck drivers are modern heirs to the traders, conquerors, robbers and religious seers who have traveled the Grand Trunk Road for centuries. Several hundred years before the birth of Christ, Mauryan emperors laid the first, tombstone-shaped mileage markers between Kabul and Calcutta. Not much has changed on the highways since then.

The Grand Trunk Road is the backbone of northern India, connecting two of the country's largest and most important cities--New Delhi and Calcutta--while crossing the densely populated northern lowlands. At a time when India's economy is expanding, the road is a reminder that the country's infrastructure is in need of improvement. The number of trucks on the highway has doubled in the last six years, according to government statistics, but the road remains narrow, pitted, unlit and unlined.

It has become a deadly byway. More than 1,000 truck drivers, passengers and pedestrians die in accidents along the Grand Trunk Road each year. A five-day ride with Bhajan Singh from the Indian capital to the Ganges delta revealed an almost surreal display of carnage: trucks lying smashed and upside down in ditches every 30 to 35 miles, buses wrapped around trees, vans hanging from bridges, cars squashed like bugs.

Road accidents aren't the only hazard. Sections of the highway are controlled by bandits who hijack trucks several times a month, sometimes killing the drivers. Corrupt policemen demand bribes at every checkpoint and throw drivers in jail if they don't oblige. And in rural areas, if a holy cow or a pedestrian is run over, mobs of villagers attack and burn trucks in revenge.

At dawn on the second day of Singh's trip, at a thatched-roofed truck stop 90 miles southeast of New Delhi, the countryside awoke. Bullock carts and horses rattled down the road, and goats wandered through the dirt courtyard where the trucks were parked. The air was heavy with the smells of dung and spice.

Singh lay passed out on an exposed wooden cot. Roused by the goats, he shouted abuse at 18-year-old Santosh Yadav, his assistant driver. Yadav scrambled to bring tea and hustled to wipe off the driver's seat inside the truck. Soon Singh was behind the wheel, rumbling east.

The three-month-old partnership between Singh and Yadav has been uneasy. Most of the drivers and assistants on the Grand Trunk Road are Sikhs or Moslems-outside of the mainstream Indian society. But Yadav is a Hindu. He was raised in Bihar, a poor region traversed by the highway where banditry is endemic. Fleet owners sometimes hire Biharis as assistants in the hope that their local knowledge will lessen the risk of hijacking. For this Yadav earns 200 rupees, or $12.50, per month.

At dusk, parked before an inn called Hotel the Great Papa, Yadav confessed that all was not well between him and Singh. Yadav said he was worried that Singh, whose friends and colleagues are all Sikhs, might never teach him how to drive the truck, and that he would be stuck as a poorly paid assistant for years to come.

"My main motivation is to be a driver," he said. "A good driver must have sympathy with his assistant, must give him a chance and teach him." But no matter what, Yadav said, he would never return to village life or to the small farm tended by his family. With all its risks and hardships, the road is a better living, he said.. "Some day," he mused, "I know that I will die in a truck."

On the third afternoon, as he passed two mangled trucks, just west of Varanasi, Bhajan Singh considered the question of road accidents. In his 12 years he has had only one, he said, resulting in a minor shoulder injury. But on a highway that is only 10 yards wide, crowded with fast cars, slow cows, large trucks and small children, the risk is omnipresent. "If you run over a person, the best thing to do is to run away--drive to the nearest police station and turn yourself in," he said. "If you stay at the scene of an accident, the people will burn the truck and beat you to death, especially if it is a child that has been hit.

"If you strike a cow, they might or might not attack. That depends on whether you are a Moslem. As for pigs and dogs, nobody bothers. You might have to pay some compensation."

The risks are especially acute for Singh, a Sikh who adheres to religious tradition by letting his hair and beard grow long, making him a readily identifiable target for any excited Hindu mob. Ever since the 1984 assassination of Prime Minister Indira Gandhi by Sikh bodyguards, and the subsequent riots that claimed thousands of Hindu and Sikh lives in northern India, Sikh drivers on the Grand Trunk Road have been forced to travel in convoys. On his five-day trip, Singh only rested at truck stops owned by Sikhs.

Forty miles east of Varanasi, as a pink sun fell over fields of corn and sugar cane, Bhajan Singh slammed on his brakes. To the left was a truck smashed against a tree. Around it had gathered a large group of villagers, some of whom were milling in the road, slowing traffic. Singh drove several hundred yards on and parked under a tree, out of sight.

Surrounded by villagers at the scene of the accident, farmer Ram Prashad, his eyes streaked by tears, said his 6-year old daughter had been by the side of the road two hours before when a speeding truck swerved to avoid a bicycle and hit her, killing her instantly. The girl's body lay wrapped in a cloth sack, covered by flies. The driver had run to the police for protection and had been arrested, but the villagers were restless.

A lone police constable carrying a single-shot rifle tried to hold them back and urged a reporter to leave the scene quickly. Simultaneously pushing and cajoling, the policeman managed to hold the mob back.

Beneath a full moon several hundred vehicles stood parked in congested lines at the Bihar state border, halted before a police barrier where trucks are inspected, taxes imposed, and bribes paid. Diesel exhaust and smoke from coal fires clouded the air, juice and nut vendors called out prices from beneath kerosene lamps, and a bearded medicine man wandered by offering a bottled cure for eczema from his suitcase.

Tardip Kumar, an employee of Supreme Commission agents, climbed into the cab of the truck, asked for Bhajan Singh's papers, and said he would try to clear the truck across the border within an hour. His fee was 20 rupees ($1.20), of which 10 rupees would be paid in bribes to tax inspectors, he said, while the other 10 would go to his agency.

All along the Grand Trunk Road, bribery greases the wheels of India's commerce. Singh's company allots 300 rupees ($18.75) per truck trip for small bribes to policemen and tax inspectors. Many transport firms pay thousands more in monthly payoffs handled by home offices, drivers said.

Ninety minutes after disappearing with Singh's papers, commission agent Kumar returned with a smile. "All clear," he said. At the state line Yadav leaned out of the window and handed a 5-rupee (30 cent) note to the officer in charge. The truck never slowed down.

In the jungles of central Bihar, where the road has been ripped away by floods and where hijackers are said to rule the mountains, Singh rounded a bend on the fourth day and spotted a truck lying upside down in a pit, its wheels in the air . Beside the wreck three men sat before a pup tent cooking lunch on an open fire. Singh waved as he drove past. "Those are the drivers of the truck," he said of the men outside the tent. "They've been living there for a month. They're waiting for a crane."

All along the Grand Trunk Road lie the carcasses of crashed vehicles, resting like fossils in the exact position of their accidents. The police discourage drivers from moving their trucks or buses after a crash, so as not to interfere with official investigations. But the probes are often slow to begin, and drivers refuse to leave their vehicles unattended fearing that bandits or corrupt police will loot the cargo. So the wreckage sits, week after week.

From the jungle hills the road falls slowly into coal country, a region of strip mines choked in black smoke. At brick factories along the highway, shirtless laborers hoisted large bowls of coal on their backs and carried them up ramps to load fleets of Tata trucks, which poured onto the road. Traffic slowed to a crawl.

At last, shortly after dawn of the fifth day, the coal towns yielded to cool, green rice fields on the western edge of the Ganges delta. In hours Singh would reach the outskirts of Calcutta's urban chaos. He would deliver his crates of wool and garments to the home office, rest for three days, and turn back around for New Delhi.

Before he got there, a mob attacked him. It happened in an instant. Driving close behind an unfamiliar truck with Bihar license plates, Singh turned into Memari village, a tiny hamlet of grass-topped huts 30 miles west of the Calcutta city line. Suddenly the villagers were all around him, banging on his doors, pounding on his engine, shouting for him to stop. Singh leaned out the window, pointed to a Western reporter in the cab, and shouted, "There is an officer here." Seeming to be confused, the crowd fell back. Singh jammed the gear shift and roared ahead. Some villagers chased him briefly, but let the truck go.

Twenty minutes later he saw a driver from his company coming down the highway from Calcutta, carrying a load to New Delhi. Singh flagged the man down and the two talked for half an hour. Singh never mentioned the incident in the village. An hour later, as he finally reached the Calcutta line, Singh was asked why he hadn't told his friend about the crowd that attacked him in Mamari. He laughed at the question. "Oh, that was a minor thing," Singh said. "Happens all the time."

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Teaching About Regions: A Physical and Cultural Geography Approach

GRADE: 6-8

SUBJECT: World cultures

GEOGRAPHY THEMES: region, place, human/environment interaction

DURATION: 1-2 class periods

SKILLS: Asking Geographic Questions, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: region, culture, archeologist, social scientists, artifacts

OBJECTIVES: Students will:
1. define the term region.
2. construct and reconstruct a culture according to physical and cultural attributes.

MATERIALS:

6 small flower pots, 6 paper bags, 12 index cards, color chalk or crayons, wet towels

LESSON DEVELOPMENT:

Teacher Background Information:

Region: an area that has some unifying factor or group of factors that make it different from surrounding areas. Regions can be defined by a single characteristic, such as the governmental unit, language group, or landform type or by a combination of features. For example, the tropical rainforest is defined on the basis of climate, vegetation and soils.

Culture: A way of life developed over time by a specific group as they have adapted to their natural and social environment.

Review and Motivation:

1. Defining a region
   a. Ask students to explain their idea of what a region is.
   b. Write student responses on chart paper.
   c. Compare student's definition to the definition above.
2. Identifying different regions.
   a. Students will work in groups to identify some different regions and list three characteristics of each region.
   b. Compare to an example such as a rainforest region that is wet and has dense vegetation and few people.
   c. Share group responses and discuss the variety of characteristics which can be used to define a region.
3. Explain that both physical and cultural characteristics of regions can change through time and ask students to think of ways we could obtain information about past cultures which left no written records. (Suggest that they imagine what might remain of Baltimore 1000 years from now.) Explain that archeologists and other social scientists examine artifacts from past cultures and attempt to reconstruct natural environments and cultural characteristics.

Activities:

1. The teacher should first model the steps in the procedure below. Tell the students that they will be creating a culture in a physical region of their choice. As a group they will describe the region's physical characteristics such as animals, plants, landscape, and climate. Then they will describe an appropriate culture including occupations, tools, housing, etc. For example, if the physical environment is a desert the culture may be nomadic with tents for dwellings and camels as the means of transportation. The teacher should take one of the flower pots and draw four attributes of a desert culture (tents, camels, palm trees, a person in appropriate attire). Ask students for suggestions on what pictures to include. Then place the pot in a bag and break it. Have the students examine the pieces to see if they can recreate the picture.

2. Groups are then assigned the task of creating a culture in a physical region of their choice. This is done quietly so groups are not aware of regions being created by other groups.

3. Each group will write one or two paragraphs on an index card describing their region and its attributes.

4. Each group will use the chalk or crayons to depict at least four attributes of their cultural region on the clay flower pot.

5. The pots are placed in brown grocery bags marked to identify each of the groups. The pots inside the bags are broken into several pieces and the bags are distributed to different groups.

6. Groups then act as archeologists, piecing together the pots and then reconstructing the culture and environment represented on the pot. These will be summarized in one or two paragraphs on an index card.

7. A member of each group will show the class the reconstructed pot and read the card describing the culture represented on the pot. A member of the original group that made the pot will then read their description of the culture. Discuss similarities and differences. Repeat with each group.

Conclusion:

1. Ask students to describe different items that might be used to reconstruct characteristics of past cultures.

2. Discuss what we can learn by examining artifacts and ask students what we might not be able to learn. (For example, the artifacts which remain from ancient cultures may represent only one part of society, the wealthier part of society which had more material goods. The pyramids, mummified bodies and goods of important Egyptians remain, but the common people left behind few clues to their lives.)

EVALUATION:

1. Grade the students on group participation and cooperation.

2. Quiz the students on the definition of new vocabulary and have them list characteristics which can define regions.

RESOURCES:

Barry, Iris (1981) Discovering Archaeology, Stonehenge Press: London.
Hackwell, W. John (1986) Digging into the Past, Charles Scribner Sons: New York.
The Adventure of Archaeology (1985) National Geographic Society, Washington, D.C.

Adapted from a lesson by Ann B. Dolan.

Food and Environment in Africa

GRADE: 6-8

SUBJECT: World Cultures

GEOGRAPHY THEMES: regions, human/environment interaction

DURATION: 1-2 class periods

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Presenting Geographic Information, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: famine, infant mortality rates, deficient

OBJECTIVES: Students will
1. represent data on infant mortality rates on a map
2. draw conclusions about the relationship between environment and food production
3. discuss the variety of factors which contribute to food problems

MATERIALS: article on famine in Ethiopia, Africa data sheet; ecological map of Africa, blank map of Africa

LESSON DEVELOPMENT:

Teacher Background Information:

The United Nations Food and Agriculture Organization estimates that today about 800 million people in the world are chronically undernourished. Measuring the degree of hunger is difficult but indirect information is sometimes used. One measure of hunger within a country is the infant mortality rate, i.e. the number of children who die before reaching the age of one of every 1,000 babies who are born alive. The World Health Organization (WHO) uses an infant mortality rate of 50 as a dividing point between countries where hunger is a society-wide problem and where it is not.

Although other regions of the world have more hungry people, hunger on the continent of Africa is remarkable because of the severity of famines and the large number of countries having food problems. African nations also have some of the fastest rates of population growth in the world, indicating that hunger problems will continue to be difficult to solve.

Review and Motivation:

1. Ask students if they have ever been hungry and how they felt when they were hungry. Ask if they can imagine what it would be like if they felt that way all the time and knew that there was little chance of getting enough food to satisfy their hunger.

2. Read the article on famine in Ethiopia and have students compile a list of possible causes of hunger in Ethiopia.

Activities:

1. Using the WHO figure of an infant mortality rate of 50 and above as an indicator of society-wide food problems, have students use the table to determine how many

nations of Africa may have widespread food problems. Which nation has the highest infant mortality rate? The lowest?

2. Have students prepare a map of countries with infant mortality rates above 50 using at least three categories (such as 51-75, 76 -100, above 100). Place a key on the map to show the categories used. Have students describe the pattern of infant mortality rates that is shown on the map.

3. Have students consult the ecological map of Africa to make generalizations about food problems and different types of environments. For example: do all countries with savanna environments have similar infant mortality rates? Do countries which have the highest infant mortality rates share similar environments?

4. Have students examine population doubling times for countries with the highest infant mortality rates and discuss the implications. For example: Ghana and Sierra Leone have high infant mortality rates yet both will double their population in less than 30 years. This means that women are having a large number of children and though many die, enough will survive to increase the population very rapidly. The increasing number of children will strain medical and educational services.

Conclusion:

Refer students back to the article and discuss factors other than environment which contribute to food problems. What are some possible steps that could be taken to lessen hunger in Africa?

EVALUATION:

Have students consider the introduction of a wheat production program into the nation of Gambia. Have them examine the ecological map, as well as the data sheet, to determine if this might have any effect on the hunger problem there (doubtful, considering it is an area with tropical forests). Suppose a timber harvesting program was introduced there or a program to promote fishing?

RESOURCES:

Yearly Population Data Sheets from the Population Reference Bureau, Inc., 777 14th Street NW, Washington, DC 20005.

This article is about a massive famine that brought suffering to millions in Ethiopia in 1983. The problems which contributed to the famine in Ethiopia are common to other African countries as well.

Famine in Ethiopia

The difference between this crisis year and a normal year in Ethiopia is that tens of thousands of people face starvation where usually the numbers who starve can be counted in the hundreds...Ethiopia normally receives about 250,000 tons of food aid just to maintain its severely deficient level of nutrition...With people normally living on the margin, drought pushes them over the edge and large death tolls can result, said Martin Mock, the UN World Food Program's senior advisor in Addis Ababa. There is no buffer if the rains fail. During last year's planting season...rainfall was down by 71 percent in Welo province and 62 percent in Gondar province compared with the previous year, [but] total amounts of rainfall can be misleading. Gondar received about 27 inches in last year's drought, a reasonable amount in many parts of the world. Ethiopia, however, "cannot capture the rain," Mock said, because irrigation in food crops in the highlands is nonexistent, and food crops cannot pay for irrigation projects because of the vast distance to cover. Rain outside the planting season, when almost 95 percent of the country's food crops are sown, is worthless at best and can be harmful...since it spurs the growth of worms that destroy the crops.

Peasant farming, accounting for the bulk of agricultural output in Ethiopia is among the most primitive in the world. If a peasant is lucky, he has an ox to pull a single-blade plow, often with a wooden blade. Otherwise, he uses a pick or hoe. Use of fertilizers is rare because of high import and transportation costs. In addition, uneven precipitation makes fertilization a gamble because fertilized earth will burn if there is not enough rain. In such a poor country little is spent on agricultural research and extension work, and market prices often do not encourage greater production if the conditions are good...For the past three years the rate of growth in agricultural production was lower than the pace of the country's population increase, about 2.8 percent. Ethiopia's primitive agricultural system must feed Africa's second largest population.

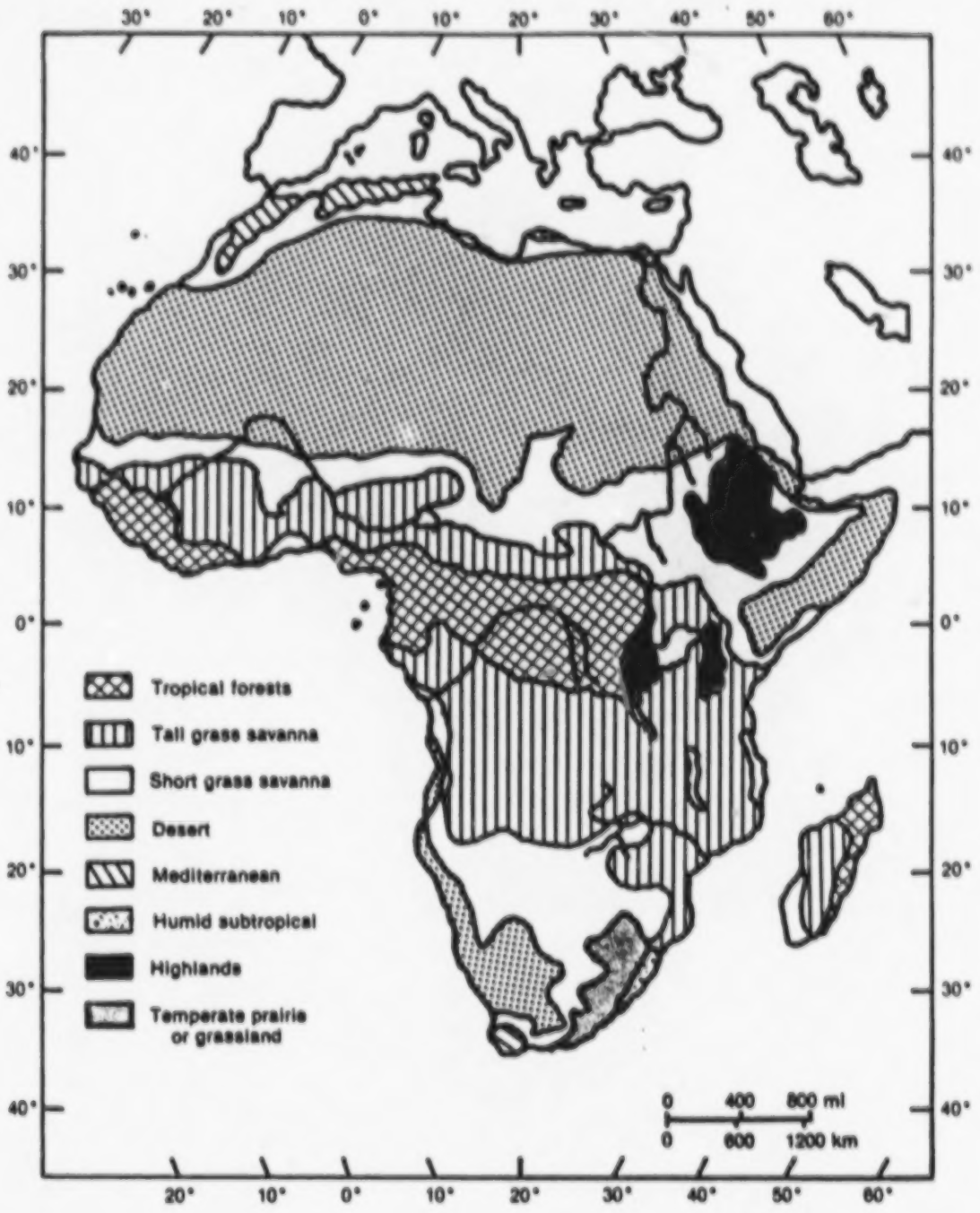
From Jay Ross, "Fragile Agricultural System Keeps Ethiopia in Food Line," The Washington Post, June 29, 1983, pages A1 and A24. Reprinted with permission.

1988 World Population Data Sheet

	Population Estimates mid-1988 (millions)	Population Doubling Time in Years (at current rate)	% Population Under Age 15/65+	Urban Population (%)
WORLD	**5,128**	**40**	**34/6**	**45**
More Developed	**1,198**	**120**	**23/11**	**73**
Less Developed	**3,931**	**33**	**37/4**	**37**
Less Developed (excl. China)	**2,844**	**29**	**40/4**	**35**
AFRICA	**623**	**24**	**45/3**	**30**
Northern Africa	**138**	**25**	**42/4**	**41**
Algeria	24.2	22	46/4	43
Egypt	53.3	24	40/4	45
Libya	4.0	22	45/3	76
Morocco	25.0	27	42/4	43
Sudan	24.0	24	45/3	20
Tunisia	7.7	31	40/4	53
Western Sahara	0.2	26	-/-	--
Western Africa	**194**	**24**	**45/2**	**28**
Benin	4.5	23	49/5	39
Burkina Faso	8.5	24	44/3	8
Cape Verde	0.3	26	46/5	27
Cote d'Ivoire	11.2	22	46/3	43
Gambia	0.8	34	44/4	21
Ghana	14.4	22	44/3	31
Guinea	6.9	29	43/3	22
Guinea-Bissau	0.9	29	44/3	27
Liberia	2.5	22	47/3	42
Mali	8.7	24	46/3	18
Mauritania	2.1	23	46/3	35
Niger	7.2	24	47/3	16
Nigeria	111.9	24	45/2	28
Senegal	7.0	26	44/3	36
Sierra Leone	4.0	36	43/3	28
Togo	3.3	21	45/3	22
Eastern Africa	**186**	**21**	**47/3**	**17**
Burundi	5.2	24	45/3	5
Comoros	0.4	21	47/4	23
Djibouti	0.3	28	46/3	74
Ethiopia	48.3	23	46/3	10
Kenya	23.3	17	51/2	19
Madagascar	10.9	25	44/3	22
Malawi	7.7	21	47/3	12
Mauritius	1.1	58	31/5	42
Mozambique	15.1	27	45/3	19
Reunion	0.6	36	33/5	60
Rwanda	7.1	19	48/2	6
Seychelles	0.1	37	36/6	37
Somalia	8.0	23	45/3	34
Tanzania	24.3	19	48/3	18
Uganda	16.4	20	48/3	10
Zambia	7.5	19	47/3	43
Zimbabwe	9.7	20	48/3	24
Middle Africa	**64**	**25**	**44/3**	**34**
Angola	8.2	27	45/3	25
Cameroon	10.5	26	43/4	42
Central African Republic	2.8	28	43/4	35
Chad	4.8	35	42/4	27
Congo	2.2	21	45/3	48
Equatorial Guinea	0.3	37	40/5	60
Gabon	1.3	44	35/6	41
Sao Tome and Principe	0.1	25	46/5	35
Zaire	33.3	23	46/3	34
Southern Africa	**40**	**30**	**39/4**	**53**
Botswana	1.3	20	48/4	22
Lesotho	1.8	27	42/4	17
Namibia	1.7	24	44/5	51
South Africa	35.1	31	38/4	56
Swaziland	0.7	23	46/3	26

POLITICAL MAP: COUNTRIES ONLY

ECOLOGICAL AREAS OF AFRICA



Source: Office of Technology Assessment, *Africa Tomorrow: Issues in Technology, Agriculture, and U.S. Foreign Aid*, December 1984. P.77.

Lessons with an Interdisciplinary Focus

Mapping a Novel, Short Story or Play

GRADE: 6-8

SUBJECT: Interdisciplinary (English/Language Arts)

GEOGRAPHY THEMES: location, place, movement

DURATION: 2 class periods

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Presenting Geographic Information

VOCABULARY: location, place, movement, key, symbols, title, border, scale, north arrow or compass rose

OBJECTIVES:

Students will:

1. read a book or passage from a book, focusing specifically on location and place clues.
2. analyze the clues from the book and design a map of the story or passage.
3. discuss how the maps of different groups differ as a result of creatively interpreting the book or passage.

MATERIALS:

poster board, crayons or markers

LESSON DEVELOPMENT:

Review and Motivation:

1. Introduce or review the themes of geography through reading passages of the selected novel, story, or play or by looking at pictures from the same.

2. Read a passage from the novel to the students and have them identify clues which could be categorized as location, place, or movement.

3. Show photographs from textbooks, trade books or novels and have student identify themes portrayed.

4. Review or define basic map elements such as symbols, title, key, scale, border and north arrow or compass rose. Use an existing classroom map to illustrate.

Activities:

(See attached sample)

1. Reading for a purpose.
   a. The students will read the story or passage and focus on clues that describe location, place or movement in the reading. These can be recorded on a chart.
   b. Discuss and share charts.
2. Organizing the clues into a map.
   a. Working in groups the students should design a rough sketch of the geographic setting.
   b. Group members will discuss and agree on the placement of the important physical and cultural features and then construct a map for the setting of the novel or passage.

Enrichment activity:

1. Have the student go back to the novel and write important events or problems the main characters faced as they moved around the setting.
2. Discuss the reasons for the main character's movements.

Conclusion:

1. Map differences
    a. Each group will share their map and discuss why specific physical and cultural features were chosen.
    b. Each group will share passages which led them to construct the map in the way they did.
2. Reading interpretation
    a. Discuss as a class how different reading clues can be interpreted.
    b. Discuss the effect this has on the visual product.

EVALUATION:

1. Each map should be evaluated on
    a. physical characteristics (e.g., natural landscape features)
    b. human characteristics (e.g., housing and other man made features)
    c. map elements (e.g., title, key, symbols, scale, north arrow)
2. The students can be quizzed on the vocabulary words or the actual map.
3. Students should be evaluated on group participation skills.

RESOURCES:

Greenfield, Cook (1980) The Dictionary of Imaginary Places. Macmillan Publishing Company, Inc.

Adapted from a lesson by Ann B. Dolan.

Other suggested novels include:

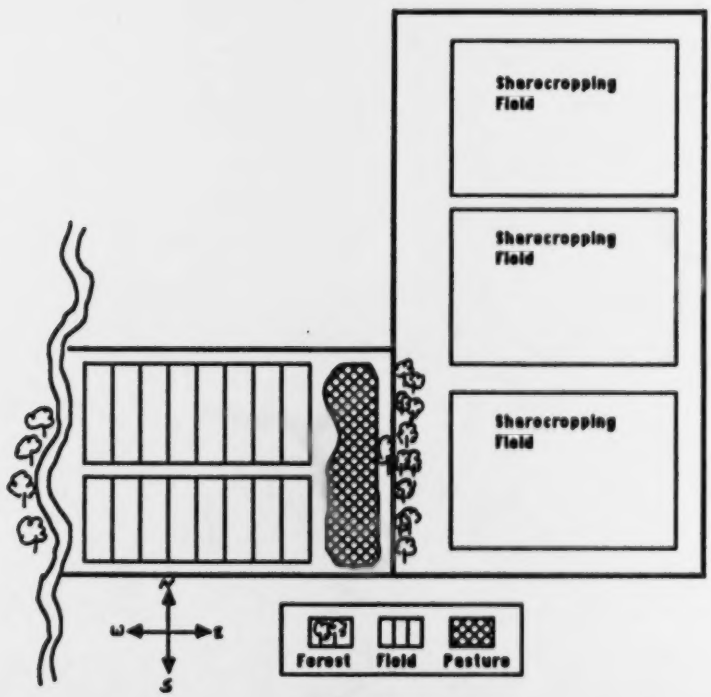
Alice's Adventures in Wonderland
Call of the Wild
War of the Worlds
Sounder
Treasure Island
Tom Sawyer
Around the World in 80 Days

Sample Passage for Mapping

Before us the narrow, sun-splotched road wound like a lazy red serpent dividing the high forest bank of quiet, old trees on the left from the cotton field, forested by giant green and purple stalks, on the right. A barbed-wire fence ran the length of the deep field, stretching eastward for over a quarter of a mile until it met the sloping green pasture that signaled the end of our family's four hundred acres. An ancient oak tree on the slope, visible even now, was the official dividing mark between Logan land and the beginning of a dense forest. Beyond the protective fencing of the forest, vast farming fields, worked by a multitude of sharecropping families, covered two thirds of a ten-square mile plantation. That was Harlan Granger land.

-excerpt from Roll of Thunder, Hear My Cry by Mildred D. Taylor, Bantam Books, 1976, page 3.

Maps to Accompany Passage from "Roll of Thunder, Hear My Cry"



Perception of the Great Plains in Nineteenth Century Folksongs: Teaching About Place

GRADE: 6-8

SUBJECT: Interdisciplinary (Music)

GEOGRAPHY THEMES: location, place, human/environmental interaction, movement, region

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY:

OBJECTIVES: Students will:

1. explain that people's perception of a region may be either positive or negative and that perceptions may change in the face of adversity.
2. infer the perceptions and attitudes early settlers held toward the Great Plains and hypothesize the reasons for the differences in the perceptions and attitudes.
3. describe factors that influence perceptions and attitudes toward a place.

MATERIALS: Copies of four folksongs:
Western Home (*Home on the Range*)
Land County Bachelor (*Starving to Death on My Government Claim)*
Dakota Land (*Nebraska Land*)
The Kansas Fool
Copies of the Record Sheet

LESSON DEVELOPMENT:

Teacher Background Information:

The Great Plains of the United States provide the setting for the four folksongs used in this lesson. The region was chosen because such varied perceptions of its nature have existed over the years (Blouet and Lawson, 1975) and because it is an important curricular focus in U.S. history courses. Many maps of the 1830s and 40s labeled the area as the "Great American Desert." Today it is shown as one of the world's most important agricultural and ranching areas.

The history of intense Anglo settlement in the region began with the close of the Civil War. The development of railroads, increasing European immigration, new technology, and inexpensive land were all important factors leading to the westward expansion of the nation. While settlers in the eastern part of the region were generally successful, many in the central and western parts were not. Few of the early settlers had sufficient resources to survive a bad year, especially if it occurred soon after they arrived. Most were not knowledgeable enough of the peculiarities of the region. Unfavorable weather conditions, poorly adapted crops and farming practices, and grasshoppers resulted in many failures. Settlement in the region produced, along with varying degrees of economic success and failure, a large number of folksongs providing commentary on both the region and the settlers.

All the songs selected for use seem to have originated in the 1870s or 1880s. *Western Home* is attributed to Dr. Higley Brewster (Silber and Robinson, 1967). Dr. Brewster, a bachelor medical doctor, is supposed to have written it in his dugout in Smith County, Kansas in 1873. Dr. Brewster was apparently enamored with his new home after

having spent many years in the East. *Lane County Bachelor* also originated in Kansas at about the same time and illustrates the predicament of a homesteader on his 160 acres. The anonymous author saw a different Kansas than did Dr. Brewster. *Dakota Land* points out that nature was a powerful adversary and that drought and crop failure discouraged many. Those who depended on agriculture for the support of their family felt much differently about their new home than did a physician or a bachelor farmer who had only himself to support. *The Kansas Fool* probably originated somewhat later than the other three songs. It suggests that even when the weather was favorable, the settlers still faced low prices for their products and the possibility of bank foreclosures on mortgages incurred during the lean years.

Review and Motivation:

1. Begin with a general discussion about the different places pupils have visited and how they reacted to these unfamiliar places. Relate some of your own experiences, such as visiting a large and unfamiliar city, a different part of the U.S. or another country. If several students have moved, ask them how they initially felt about the place to which they moved. What were some of the reasons that they felt the way they did?

2. Tell the students that the objective of this lesson will be to examine reactions and attitudes of early settlers on the Great Plains and to try and infer the reasons behind their reactions. Explain that they will be inferring reactions and reasons from folksongs that were well known in the period from the 1870s to 1890s.

3. Use a wall map of the United States to point out the Great Plains. Relate that all the songs they will be using originated and developed between 1870 and 1890 in what is now present day Kansas, Nebraska, South Dakota, and North Dakota.

Activities:

1. The text and melody line for each of the folk songs are included with this lesson. Teachers will need to decide how to introduce the songs to the class. Teachers with musical ability may want to play the songs using a guitar or autoharp and have the class sing along. Alternatives include having a music teacher record the songs on a cassette tape or simply using the text of the songs.*

2. Hand out sheets containing each of the folksongs and four copies of the record sheet included in this lesson.

3. Play the first song through once while having the students read the text they have in front of them. Give the students a chance to raise questions regarding any unfamiliar words or phrases. Play the song a second time, reminding students to focus on the questions on their record sheets. Focus class discussion by raising the questions posed on the sheet.

4. Use the same procedure for each of the folksongs. As pupils interpret the song, the major ideas should be recorded on the chalkboard or large chart. Once the students have collected data from each of the folksongs, review, compare, and contrast the results. The following key questions might be used:

   a. How would you describe the responses of early settlers to the Great Plains as portrayed in song #1? ...in song #2? ...in song #3? ...in song #4?
   b. In what ways are the responses different? ...similar?
   c. How would you explain these similarities and differences?

Conclusions:

Ask students what conclusions they can draw about why people feel the way they do about places.

EVALUATION:

Have students select a place and write a paragraph describing why people would like that place and others would not. Have them explain possible reasons behind these different attitudes.

RESOURCES:

Blouet, Brian W. and Merlin P. Lawson, eds. 1975. *Images of the Great Plains: The Role of Human Nature in Settlement.* Lincoln, Nebraska: University of North Dakota Press.

Carney, George O., ed. 1978. *The Sounds of People and Places: Readings in the Geography of Music.* Washington, D.C.: University Press of America.

Lingenfelter, Richard E., Richard A. Dwyer, and David Cohen, eds. 1968. *Songs of the American West.* Berkeley and Los Angeles: University of California Press.

Silber, Irwin and Earl Robinson, eds. 1967. *Songs of the Great American West.* New York: MacMillan.

Sandburg, Carl. 1927. *The American Songbag.* New York: Harcourt, Brace.

Adapted from a lesson by James B. Kracht, Department of Curriculum & Instruction, Texas A&M University, College Station, Texas. It originally appeared in Journal of Geography, Vol. 88, No. 6 November-December, 1989, pp. 206-212. Reprinted with permission.

***For a recorded copy of the four folk songs, send a blank audio cassette to: Maryland Geographic Alliance, UMBC-Geography, 5401 Wilkens Avenue, Baltimore, MD 21228.**

Record Sheet

1. What are some of the things described in the environment?

2. How do you think the people felt about the environment?

3. What reasons might the people have had for feeling the way they did?

STARVING TO DEATH ON A GOVERNMENT CLAIM
(OR THE LANE COUNTY BACHELOR)

by Frank Baker

Tune: The Irish Washerwoman

Text: "The Lane County Bachelor," MS by Ed Kepner dated March 8, 1891, in Forsyth Library, Fort Kays Kansas State College. *Heritage of Kansas*, May, 1961, Kansas History and Folksong, by Bill and Mary Koch; music adapted from traditional sources.

G
Frank Bak-er's my name, and a bach-e-lor I am; I'm
D7 G
keep-ing old batch on an el-e-gant plan. You'll
find me out west in the coun-ty of Lane— I'm
D7 G
starv-ing to death on a gov-ern-ment claim. My
house, it is built of the nat-u-ral soil; The
D7 G
walls are e-rec-ted ac-cord-ing to Hoyle. The
roof has no pitch, but is lev-el and plain, And I
D7 G
al-ways get wet when it hap-pens to rain.
Hur-rah for Lane Coun-ty, the land of the free, The
D7 G
home of the grass-hop-per, bed-bug, and flea. I'll
sing loud its prais-es and tell of its fame While
D7 G
starv-ing to death on a gov-ern-ment claim.

Starving to Death on a Government Claim cont.

Frank Baker's my name, and a bachelor I am;
I'm keeping old batch on an elegant plan.
You'll find me out West in the County of Lane
I'm starving to death on a government claim.
My house, it is built of the national soil'
The walls are erected according to Hoyle,
The roof has no pitch, but is level and plain,
And I always get wet when it happens to rain.

But hurrah for Lane County, the land of the free,
The home of the grasshopper, bedbug, and flea,
I'll sing loud its praises and boast of its fame
While starving to death on my government claim.

My clothes they are ragged, my language is rough;
My bread is case-hardened both solid and tough;
The dough it is scattered all over the room,
And the floor, it gets scared at the sight of a broom.
My dishes are scattered all over the bed;
They are covered with sorghum and government bread,
Still I have a good time; and live at my ease
On common-sop sorghum, old bacon and grease.

Then come to Lane County. Here is a home for you all
Where the winds never cease and the rains never fall,
And the sun never sets but will always remain
Till it burns you all up on a Government Claim.

How happy am I when I crawl into bed,
And a rattlesnake rattles a tune at my head,
And the gay little centipede, void of all fear,
Crawls over my neck and down into my ear;
And the little bedbugs, so cheerful and bright,
They keep me a-laughing two-thirds of the night,
And the gay little flea with sharp tacks in his toes
Plays "Why don't you catch me?" all over my nose.

But hurrah for Lane County, the land of the West,
Where the farmers and laborers are always at rest,
For there's nothing to do but sweetly remain,
And starve like a man on your government claim.

How happy am I on my government claim,
For I've nothing to lose nor I've nothing to gain.
I've nothing to eat, and I've nothing to wear,
And nothing from nothing is honest and fair.
Oh, it is here I am solid and here I will stay,
For my money's all gone and I can't get away;
There is nothing that makes a man hard and profane
Like starving to death on a government claim.

But hurrah for Lane County where blizzards arise,
Where the winds never cease and flea never dies,
Come join in its chorus and sing of its fame,
You poor hungry hoboes that's starved on the claim.

No, don't get discouraged, you poor hungry men,
For we are all here as free as a pig in a pen;
Just stick to your homestead and battle the fleas
And look to your Maker to send you a breeze.
Now, all you claim holders, I hope you will stay
And chew your hardtack till you're toothless and gray;
But, as for myself, I'll no longer remain
And starve like a dog on a government claim.

Farewell to Lane County, farewell to the West,
I'll travel back East to the girl I love best;
I'll stop in Topeka and get me a wife,
And there shall I stay the rest of my life.

(Lingenfelter, Dwyer and Cohen 1968, pp. 457-458)

Music: As sung by Vance Randolph, Library of Congress Recording L 30. Transcribed by David Cohen.

Variants: Lomax (1910), pp. 278-279; Pound (1915), pp. 30-31), and (1922), pp. 178-180; Sandburg (1927), pp. 120-122; Clark (1932), p. 71; Lomax and Lomax (1934), p. 434, and (1938), pp. 407-408; Hull (1939), pp. 52-53; McMullen (1946), pp. 133-135; Lomax and Lomax (1947), pp. 238-239; Randolph (1948), pp. 190-191; Koch and Koch (1961), p. 10; Malone (1961), pp. 146-149; Moore and Moore (1964), pp. 282-285.

WESTERN HOME

Words: Dr. Higley Brewster

Music: Daniel E. Kelly

Text from *Kirwan Chief* (Kirwan, Kansas), Feb. 26, 1876, reproduced in *Heritage of Kansas*, May, 1958; music adapted from the melody in *Cowboy Songs*, Lomax.

E A E
1. Oh! give me a home where the buf-fa-lo roam, Where the deer and the
(F♯) B7 E (E7)
an-te-lope play;___ Where nev-er is heard a dis-
A (Am) E B7 E
cour-ag-ing word,_ And the sky is not cloud-ed all day.___
Chorus G B7 V E
A home!___ A home!__ Where the deer and the
(F♯) B7 E (E7) A
an-te-lope play;___ Where sel-dom is heard a dis-cour-ag-ing
(Am) E B7 E D.C.
word, And the sky is not cloud-ed all day.___

Refrain:
A home! A Home!
Where the deer and the antelope play;
Where seldom is heard a discouraging word,
And the sky is not clouded all day.

1. Oh! Give me a home where the buffalo roam,
   Where the deer and the antelope play;
   Where never is heard a discouraging word,
   And the sky is not cloudy all day.
   Refrain:

2. Oh! give me land where the bright diamond sand
   Throws its light from the glittering streams,
   Where glideth along the graceful white swan,
   Like the maid to her heavenly dreams.
   Refrain.

3. Oh! give me a gale of the Solomon vale
   Where the lifestreams with buoyancy flow;
   On the bank of the Beaver, where seldom if ever
   Any poisonous herbage doth grow.
   Refrain.

4. How often at night, when the heavens are bright
   With the light of the twinkling stars,
   Have I stood here amazed and asked as I gazed
   If their glory exceeds that of ours.
   Refrain.

5. I love the wild flowers in this bright land of ours,
   I love the wild curlew's shrill scream;
   The bluffs and white rocks and antelope flocks,
   That graze on the mountain so green.
   Refrain.

6. The air is so pure and the breezes so free,
   The zephyrs so balmy and light,
   That I would not exchange my home here to range
   For ever in azures so bright.
   Refrain.

(Silber and Robinson 1968, p. 222)

DAKOTA LAND

Refrain:
O Dakota land, sweet Dakota land
As on thy fiery soil I stand,
I look across the plains,
And wonder why it never rains,
Till Gabriel blows his trumpet sound
And says the rain's just gone around.

1. We've reached the land of desert sweet,
   Where nothing grows for man to eat,
   The wind it blows with feverish heat
   Across the plains so hard to beat.
   Refrain

2. We've reached the land of hills and stones
   Where all is strewn with buffalo bones.
   O buffalo bones, bleached buffalo bones,
   I seem to hear your sighs and moans.
   Refrain

3. We have no wheat, we have no oats,
   We have no corn to feed our shoats;
   Our chickens are so very poor
   They beg for crumbs outside the door.
   Refrain

4. Our horses are of broncho race;
   Starvation stares them in the face.
   We do not live, we only stay;
   We are too poor to get away.
   Refrain

(Sandburg 1927, pp. 280-281. 0-204133.)

THE KANSAS FOOL

by C. S. Whitney
Tune: Beulah Land

Text and Music: Vincent (1891), pp. 28-29.

We have the land to raise the wheat, And ev - ery-thing that's
good to eat; And when we had no bonds or debt, We
Chorus
were a joi - ly, hap - py set. Oh! Kan - sas fool! poor
Kan - sas fool! The bank - er makes of you a tool. I
look a-cross the fer - tile plain, Big crops made so by gen - tle rain; But
twelve-cent corn gives me a-larm, And makes me want to sell my farm.

Refrain:
Oh! Kansas fool! Poor Kansas fool!
The banker makes of you a tool. I look across the fertile plain,
Big crops—made so by gentle rain; But twelve-cent corn gives me alarm,
And makes me want to sell my farm.

1. We have the land to raise the wheat
   And everything that's good to eat;
   And when we had no bonds or debt,
   We were a jolly, happy set.
   Refrain

2. With abundant crops raised everywhere,
   'Tis a mystery, I do declare,
   Why, farmers all should fume and fret,
   And why we are so deep in debt.
   Refrain

3. At first we made some money here,
   With drouth and grasshoppers each year;
   But now the interest that we pay
   Soon takes our money all away.
   Refrain

4. The bankers followed us out west,
   And did in mortgages invest;
   They looked ahead and shrewdly planned,
   and soon they'll have our Kansas land.
   Refrain

(Lingenfelter, Dwyer and Cohen 1968, pp. 476-477).

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Population and Occupations in 19th Century Cities

GRADE: 6-8

SUBJECT: Interdisciplinary (English, Language Arts)

GEOGRAPHY THEMES: place, movement, region

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses

VOCABULARY: city directory, immigrants, urbanization

OBJECTIVES: Students will:
1. Interpret demographic data
2. describe population and economic characteristics of a large city at the turn of the century (using Baltimore as an example).

MATERIALS: Packet of pages from R.L. Polk Baltimore City Directory
-Abbreviations page
-Name Listing page from 1890 Directory
-Name listing page from 1900 Directory
Current map of the city (available from AAA or most book stores)

LESSON DEVELOPMENT:

Teacher Background Information:

The city directory was the nineteenth century equivalent of the present day phone book. It listed the name, occupation, and address of city residents. It also included a list of businesses, goverment officials, and the location of major city buildings. Data for the directory was collected by private companies who then published their results. Businesses could purchase ads in the directory similar to the "Yellow Pages" today.

Review and Motivation:

1. What do you know about large American cities around 1900? What do you think it was like to live in Baltimore around the turn of the century?
   a. Discuss immigration trends
   b. Discuss general conditions of cities: dirty, noisy, crowded, etc.
   c. Discuss the idea of movement within cities. People did not remain in one place even in 1900.
2. Introduce the city directory
   a. Show the class a present day phone book and ask them what they think people used 100 years ago?
   b. Explain what the city directory was and how it worked; compare to census data and the phone book.
   c. Emphasize that the directory was a commercial document prepared by various companies that used advertising to pay for its distribution.

Activities:

1. Divide the class into 4-5 student groups of mixed ability.
2. Pass out the directory packets to each group. Guide the class through the packets:

a. Show how the abbreviation page explains common words and occupations. Ask them what the "*" by some names stands for. (This symbol was used to identify "colored" residents, i.e. anyone who was not White. In Baltimore at that time most of these residents would have been Black Americans.)

b. Pick a name at random and interpret the data. Be sure the class understands that these are excerpts only.

3. Have each group use the same work packet to answer the following questions. (To make subsequent group reports less repetitive, group questions may be focused on certain subjects such as jobs in general, jobs held by particular groups of persons, or residential location of the population.)

a. Look at the abbreviations on the 1890 sheet. What is a blksmith? A brklyr? A wid? Why would these people be listed in a directory?

b. On the 1890 page, find the name Clifford H. Green. What is his address? His job? Can you find his name on the 1900 page? What has changed?

c. Can you find any people who have moved or are not listed anymore? What might that mean?

d. What is one of the most common jobs? What does this tell you about life in the city?

e. How many names on the 1890 page have asterisks? Is there much change between 1890 and 1900? Why do you think Black Americans citizens were highlighted in this way? What do you think would happen today if minorities were highlighted in telephone books? What types of jobs did Black Americans hold? Blacks often worked as calkers in ship building as well as laborers and service workers such as waiters, porters, and drivers.

f. Are there occupations listed that you do not understand?

g. What types of jobs did women hold?

h. Where did the Blacks live in 1890 and 1900? (Blacks often lived on narrow alleys in neighborhoods occupied by Whites.) Were they integrated or segregated from the white population? Were there any residential clusters of Blacks?

i. Using a current map of Baltimore, can you find any streets or addresses listed in the directory? If you can, where are they located? What does this tell you about the growth of the city?

4. Each group should have their spokesperson report back to the class. Encourage reporters to include the problems they encountered and data they could not find or understand.

Conclusion:

1. Ask students to individually answer the following question: Imagine you are the mayor of Baltimore in 1900 and you want to improve the city with paved roads and a new sewer system. How would you use the city directory to help you plan the project? Is there any information you think you might need that is not in the directory?

2. How could the page of abbreviations be reorganized for easier use? (for example, categories such as occupations, addresses, and directions).

3. How are phone directories today similar to and different from the directories used at the turn of the century?

EVALUATION:

Monitor groups for evaluation and help--many questions can be expected. Assess students on group participation, ability to interpret and synthesize data, and quality of individual responses.

Adapted from a lesson by Harry Wilkins.

R. L. Polk & Co's

BALTIMORE CITY DIRECTORY

Abbreviations

ab	above	*furn*	furniture	*opp*	opposite
advt	advertisement	*gds*	goods	*opr*	operator
agt	agent	*general*	general	*P E*	Protestant
al	alley	*Ger Lut*	German		Episcopal
Am	American		Lutheran	*Pa av*	Pennsyl. Ave
assn	association	*Greenm't Av*	Greenmount	*paperhngr*	paperhanger
av	avenue		Avenue	*photog*	photographer
Balto	Baltimore	*h*	house	*pk*	park
Balto Co	Baltimore	*h furng*	house	*Presb*	Presbyterian
	County		furnishing	*prin*	principal
barkpr	barkeeper	*H'mstead*	Homestead	*prod com*	produce
Bdway	Broadway	*Hpdn*	Hampden		commission
bkbinder	bookbinder	*imp*	importer	*prof*	professor
bkpr	bookkeeper	*ins*	insurance	*prov*	provisions
Bldg	building	*insp*	inspector	*pub*	publisher
blksmith	blacksmith	*inst*	instrument	*r*	rent
boarding	boarding house	*L P*	Locust Point	*Rev*	Reverend
brass wkr	brass worker	*la*	lane	*R R*	railroad
brklyr	bricklayer	*lab*	laborer	*s*	south
c	corner	*laund*	laundress	*sec*	secretary
cabt mkr	cabinet	*lithog*	lithographer	*stenogr*	stenographer
	maker	*ltd*	limited	*sq*	square
carp	carpenter	*mach*	machinist	*supt*	superintendent
cashr	cashier	*mnfg*	manufacturing	*surg*	surgeon
CH	church	*math insts*	mathematical	*tel*	telegraph
clk	clerk		instruments	*tel opr*	telegraph
Co	company	*matls*	materials		operator
com mer	commission	*Md*	Maryland	*treas*	treasurer
	merchant	*mdse*	merchandise	*undertkr*	undertaker
commr	commissioner	*M E*	Methodist	*uphlstr*	upholsterer
condtr	conductor		Episcopal	*USA*	United States
confectr	confectioner	*M P*	Methodist		Army
ct	court		Protestant	*USN*	United States
ctr	cutter	*mkr*	maker		Navy
e	east	*Mkt*	Market	*vet surg*	veterinary
EW	E. Woodberry	*mnfr*	manufacturer		surgeon
eating h	eating house	*mngr*	manager	*v pres*	vice-president
elec insts	electrical	*mech*	mechanical	*w*	west
	instruments	*men's furng*	men's	*WW*	W. Woodberry
embdr	embroiderer		furnishings	*wheelwrt*	wheelwright
eng	engineer	*mess*	messenger	*whol*	wholesale
ext	extended	*Mt. Vernon*	Mount Vernon	*wid*	widow
Fdk av	Frederick Ave	*n*	north	*wks*	works
frt	freight	*Nat*	National	*Wvy*	Waverly
ft	foot	*nr*	near		

*Green, Chas, lab, 1203 Smith
Green, Chas, kpr Lazaretto Light House
Green, Chas A. lab, 2175 Calverton rd
*Green, Chas A. porter, 652 George
Green, Chas E. clk, 1230 e Balto
*Green, Chas E. lab, 911 Plum al
*Green, Chas F. driver, 808 Chestnut al w
Green Chas H. (Jos Green & Son and Green & Fagan) 822 Columbia Av
Green, Chas H. brklyr, 1016 n Calhoun
Green, Chas H. candymkr, 1029 Hollins
Green, Chas H. huckster, 515 Campbell
*Green, Chas H. lab, 807 Elder al
*Green Chas L. lab, 639 Penn al
*Green, Chas O. calker, 600 n Castle
Green, Chas R. electrician, 404 n Eutaw
*Green, Chas S. junk, 1133 Brewer al
Green, Chas W. carriagemkr, 2820 Pa av
Green, Chas W. eng, 2281 Gough
*Green, Christopher C. lab, 622 n Bethel
Green, Clara, grocer, 712 n Durham
Green, Clarence R. clk, 336 s Mount
Green, Clifford H. lineman, 907 Granby
*Green Clinton N. carp, 807 Elder al
Green, Danl, brakeman, 1441 Garrett av
Green, Danl C. cutter, 818 n Ann
*Green, Danl E. lab, 120 Ropewalk al
Green Danl, N. eng, 1114 n Third e
Green, Danl S. painter, 813 Gorsuch av
*Green, Danl W. porter, 552 St. Mary
*Green David B. driver, 829 Peirce
*Green, Dents, cook, 777 w Mulberry
*Green, Dorsey, junk, 575 w Preston
*Green, Edward, lab, 131 w Welcome al
*Green, Edward, waiter, 729 Chestnut al w
Green, Edward, H. molder, 1826 w Pratt
Green, Edwd P. boilermaker, 1009 York rd
*Green, Eli, porter, 1919 Etting
Green, Elizab wid Chas, 408 S. Patterson
Green, Elizab wid H, 1529 Ramsay
Green, Ephraim L. lab, 3116 Dillon
Green, Ernest, clk, 693 w Mulberry
Green, Esther Mrs, grocer, 1527 Eastern av
*Green, FW, waiter, Johns Hopkins Hosp
Green, Fannie H. teacher, 2040 e Pratt
Green Frank, lab, 1444 Garrett av
Green, Frank, molder, 1826 w Pratt
Green, Frank, student, 2018 Oak
Green, Frank A. brklyr, 616 Baker
Green, Frank D. plumber, 11 Independence
Green, Frank D. salesman, 18 w Second
Green, Frank L. salesman, 9 s Bond
Green, Frank W. carp, 413 Myrtle av
Green, Fredk A. bkpr, 510 Madison n
*Green Geo, barber, 1717 Maccubbin
Green, Geo, brakeman, 1827 Hanover
Green, Geo, driver, 606 Chappell
*Green, Geo, fireman, 502 Orchard
*Green, Geo. lab, 402 n Dallas
*Green, Geo, lab, 504 Elbow al
*Green, Geo, lab, 9 s Stockton
*Green, Geo, porter, Eutaw and Dover
*Green, waiter, 807 Elder al
Green, Geo B. driver,1811 McElderry
Green C. bkpr, 1110 w Saratoga
*Green, Geo H. calker, 600 n Castle
Green, Geo J. plasterer, 1419 Mosher
Green, Geo T. cutter, 1420 s Charles
Green, Geo T. carrier, 761 w Mulberrry
Green, Geo V. pilot, 1826 n Caroline
Green, Geo W. 15 w Mulberry
*Green, Geo W. lab, 620 Cider al
Green, Geo W. prod, 842 w Lombard
Green, Geo W. prov, 9 s Bond
Green, Geo W. stovemounter, 1826 w Pratt
*Green, Geo W. lab, 2020 Goodman al
Green, Gordon W. clk, B & O Central Bldg.
Green, Hannah Mrs, 815 Hanover
*Green, Harriet, laund, 1107 Allen al e
Green, Harry C. clk, 1230 e Balto
Green Harry C. clk, 11 s Bdway
Green, Harry C. supt, Md av c Ninth
*Green, Harry T. lab, 314 n Ann
Green, Harvey E. ins, 1824 Brunt
*Green, Henry, calker, 102 s Caroline
Green, Henry, clk, 103 n Bradford al
*Green, Henry, lab, 26 s Bethel
Green, Henry, lab, 715 s Bethel
Green, Henry Jr. cabtmkr, 1029 Hollins
Green, Henry L. steamfitter, 818 n Ann
Green Herbert C. tel opr, 1016 Edmondson
*Green, Hooper, lab, 218 w Cross
Green, Horace P. blksmith, 936 McDonogh
Green, Howard, clk, 106 n Greene
*Green, Howard J. waiter, 903 Madison av
Green, Issac, horseshoer, 1369 Whatcoat
*Green, Jacob, waiter, 812 n Paca
Green, Jacob E. hostler, 1316 n Fremont av
*Green, Jas, calker, 1828 Chew
*Green, Jas, driver, 206 Inloes al
*Green, Jas, lab, 807 Elder al
Green, Jas, saloon, 509 s Caroline

Persons marked thus * are colored.

*Green, Christopher, lab,1815 n Spring
Green, Clara A. grocer, 803 n Durham
Green, Clarence E. motorman, 308 Bank ext
Green, Clarence R. clk, 336 s Mount
Green, Clarence W. 412 W Fayette
Green, Clifford H. lineman, 521 s Monroe
*Green, Danl, lab, 35 Wyoming
Green, Danl C. ctr, 1838 e Chase
Green, Danl N. eng, 1114 n 3d 3
Green, Danl S. condtr, 1122 e Fort av
Green, Danl S. painter, 313 Gorsuch av
*Green, Danl W. caner, 552 St Mary
*Green, Danl W. cook, 320 Forrest e
*Green, David, lab, 741 Ajax al n e
Green Edwd, driver, 925 Central av
*Green, Edwd, lab, 1013 s Eutaw
*Green, Edwd, lab, 1822 n Spring
*Green, Edwd, lab, 936 n Vincent
Green, Edwd B. boilermaker, 3 e Ostend
Green, Edwd B. solicitor, 2733 St. Paul
Green, Edwd C. steward, 410 n Carey
Green, Edwd F. mariner, 2223 Bank
Green, Edwd H. molder, 2030 e North av
Green, Edwd P. foreman, 1122 w Cross
*Green, Edwd W. driver, 306 s Caroline
*Green, Elder, waiter, 1111 Druid Hill av
*Green, Elijah, lab, 226 w Welcome al
*Green, Elizab, laund, 1523 Riggs av
Green, Elizab Mrs, dressmkr, 906 Harford
Green, Elizab A. Mrs, 1921 Montrose
Green, Elizab A. grocer, 406 e 21st n
Green, Elmer, E. painter, 721 Hopkins av e
*Green, Emma, laund, 333 21 1/2
Green, Ephraim L. confectr, 2 Elliott ext
Green, Ernest, sec to the Postmaster, Pimlico rd nr Park Heights av
Green, Eugene, plumber, 1815 McHenry
*Green, Fayette W. waiter, 448 w Biddle
Green, Francis W. carp, 415 Myrtle av
Green, Frank, gasftr, 11 Independence
*Green, Frank H. janitor, 510 Oxford
Green, Frank L. grocer, 9 s Bond
*Green Frank T. lab, 1 n Spring
Green, Fredk E. patternmakr, 406 Hanover
Green, Fredk W. chaser, 1904 Washington
*Green, Freeland, lab, 12 Hog al
Green, Geo, bkpr, 237 e Lafayette av
Green, Geo, lab, 59 Brick Hill
*Green, Geo, lab, 1128 Comet
*Green, Geo, lab, 516 H al
*Green, Geo, lab, 202 w Henrietta
*Green, Geo, lab, 1516 Mullikin
*Green, Geo, lab, 18 n Vincent
*Green, Geo, mariner, 8 s Bethel
Green, Geo, molder, 2122 Jefferson e
Green, Geo, pipefitter, 416 e Monument
Green, Geo A. mason, Arlington
Green, Geo B. driver, 122 n Eden
Green, Geo F. lab, 921 Fawn
Green, Geo. H. blksmith, 2911 Pa av
*Green, Geo H. calker, 518 n Caroline
*Green, Geo H. lab, 342 Rose n
Green, Geo J. plasterer, 705 Baker
Green, Geo T. blksmith, Arlington
Green, Geo T. molder, 867 w Frankilin
Green, Geo V. pilot, 1605 e North av
*Green, Geo W. calker, 1506 Fairmn't av e
Green, Geo W. driver, 1622 Presbury
Green, Geo W. lab, 59 Brick Hill
Green Glass Workers, 125 e Montgomery
Green, Gordon W. clk, B & O Central Bldg
*Green, Harriet, laund, 314 Dawson al
*Green, Harrick, nurse, 204 s Eutaw
Green, Harry, boxmkr, 1654 n Fulton av
Green, Harry, ladies' tailor, 601 St. Paul
Green, Harry, lab, 1907 Gough
Green, Harry, mach, 2807 Elliott
Green, Harry, porter, 611 Jasper
*Green, Harry W. porter, 644 Jasper
Green, Henrietta, cook, 39 Guilford al
*Green, Henry, hostler, 1 Temple
*Green, Henry, lab, 811 s Eutaw
Green, Henry, lab, 618 s Wolfe
*Green, Henry, waiter, 1231 Division
Green, Henry E. gas ftr, 1838 e Chase
Green, Henry W & Co, SM Ward mngr, window shades, 12 n Charles
Green, Herbt, C. tel opr, 800 Newington
*Green, Herman, waiter, 127 e Hamilton
Green, Horace, tckt agt, 202 s Washington
*Green, Howard, waiter, 908 Madison
Green, Howard C. clk, 106 n Carrollton av
Green, Issac V. horseshoer, 815 Jackson ct
Green, J. Morris, painter, 221 w Franklin
Green, Jacob, teacher, 217 s Eden
*Green, Jacob, waiter, 233 n Arlington av
*Green, Jacob E. Rev. 112 n Vincent
Green, Jacob H. fur mover, 517 X al
Green, Jas, coachman, 307 w Biddle
*Green, Jas, driver, 1022 Shields al

Persons marked thus * are colored.

Panama Canal and International Trade

GRADE: 6-8

SUBJECT: Interdisciplinary (Math)

GEOGRAPHY THEMES: movement, regions

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Interpreting and Analyzing Geographic Information

VOCABULARY:

OBJECTIVES: Students will:
1. solve computation problems which illustrate the importance of the Panama Canal in world trade
2. map shipping routes between various locations
3. make generalizations about the importance of the Panama Canal to various regions of the world

MATERIALS:
table of Comparative Distances, worksheet, blank world map

LESSON DEVELOPMENT:

Teacher Background Information:

Since the mid-1800s the Isthmus of Panama has been an important passageway for traffic from the east coast of the United States to the west coast. The savings in miles of this route compared to circumnavigation of South America (about 8,000 nautical miles) led to early interest in the construction of a canal through the Isthmus. The Panama Canal was a controversial undertaking and was almost stopped more than once. After many years and problems, including the loss of thousands of lives to malaria, yellow fever and other tropical diseases, the canal opened in 1914. Today the Panama Canal is a vital part of the international movement of goods, offering significant savings in distance, time, and fuel expenses.

Although distance is normally the deciding factor in selecting shipping routes, other factors may influence choice of routes. These include the cargoes to be picked up or delivered en route, draft and size limitation in ports or in canals, facilities for resupply, and tolls. Others might include government policy, security en route or political conditions.

Review and Motivation:

1. On a wall map have students locate: the Panama Canal, the Suez Canal, the Cape of Good Hope, and the Straits of Magellan.
2. Explain that these are four major world shipping channels and that prior to 1914 the Panama Canal did not exist. Ships traveling from New York to San Francisco would therefore have to travel around the tip of South America though the Straits of Magellan.
3. Ask students what problems might have been encountered in building a canal in Central America. Tell them they will be examining the economic advantages of the canal by making comparisons of time and cost savings between different routes.

Activities:

1. Have the students fill in the table of time and fuel cost savings. Use the table on Comparative Distances to find the distances of the two shortest routes and then calculate the days saved and fuel costs saved by using the Panama Canal.

Sample Problems:
What is the savings in time from New York to San Francisco via the Panama Canal compared to the Straits of Magellan route? A ship traveling at 20 knots will travel about 480 miles per day.

From the table find the distance between New York and San Francisco via the Panama Canal and the Straits of Magellan.

Panama Canal = 5, 263 miles — Straits of Magellan = 13, 122
5263 miles divided by 480 = 11 days — 13,122 miles divided by 480 = 27 days

A ship would save **16 days** by using the Panama Canal.

Using the same example, what are the savings in fuel costs? A modest size containership of 25,000 tons operating at 20 knots will consume about 180 tons of oil per day; fuel oil sells for $48 a ton.

180 tons X 11 days = 1980 tons X $48 = $95,040
180 tons X 27 days = 4860 tons X $48 = $233,280
A savings of $138,240 on fuel.

2. Draw the five routes listed on the table on the world map in one color. Then using a different color draw the routes between ports where the Straits of Magellan are the shortest distance. Do the same for the Suez Canal and the Cape of Good Hope using two different colors.

Conclusion:

1. What generalizations can be made about the advantages of the Panama Canal for different regions of the world?

For example: South of about 15 degrees S latitude in South America it is shorter to travel the Straits of Magellan to the West Coast of the United States, but north of that point it is shorter via the Panama Canal.

It is shorter for ships traveling from Europe to Asia or Australia to go through the Suez Canal. However, it is shorter to go from Europe to the West Coast of North and South America via the Panama Canal.

2. Although saving time and fuel costs are very important what other factors might influence the choice of routes?

EVALUATION:

Have the students carefully examine a wall map of the world to determine if there are any locations in which a new canal could be built during the current decade. What would be the advantages in time and fuel cost saving? What reasons might some nations give for not wanting to build a new canal?

Students should complete this table.

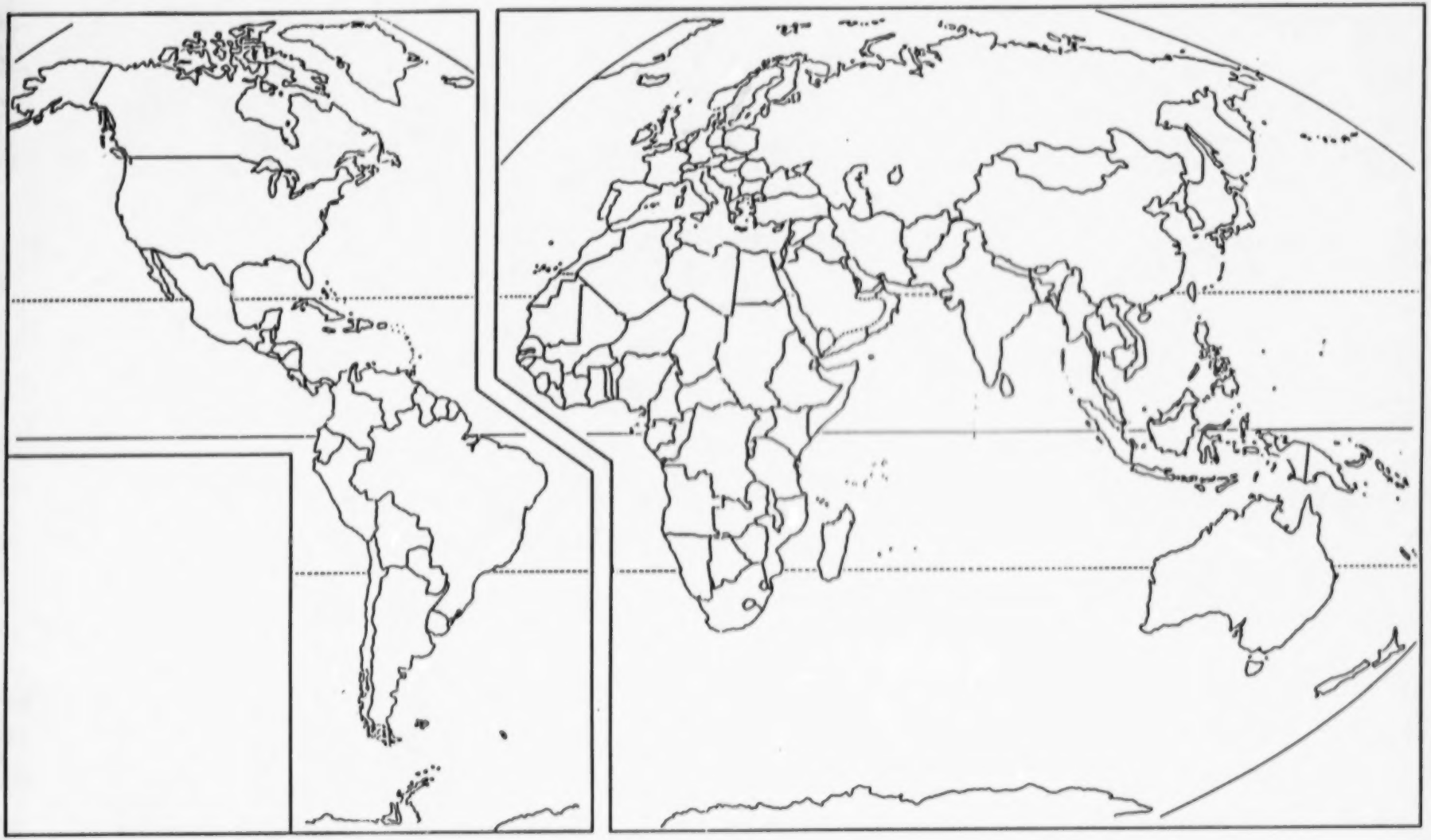
From	To	Days Saved	Fuel Cost Savings
New York	San Francisco	16 days	$153,041
Rio de Janeiro	San Francisco		
Freetown	Yokohama		
New York	Melbourne		
Gilbralter	Valparaiso		

Comparative Distances to Selected Ports Via Panama Canal and Alternate Routes

From	Via	To				
		San Francisco	Valparaiso	Yokohama	Singapore	Melbourne
New York	PC	5,263	4,634	9,700	12,523	9,942
	M	13,122	8,366	16,209	16,619	12,393
	S	17,490	19,019	13,026	10,137	12,961
	GH	19,733	18,825	15,269	12,380	12,641
Rio de Janeiro (Brazil)	PC	7,656	7,027	12,093	NA	NA
	M	8,426	3,670	11,513	11,923	7,697
	S	NA	NA	NA	11,141	NA
	GH	NA	NA	11,791	8,902	9,163
Buenos Aires (Argentina)	PC	8,674	NA	NA	NA	NA
	M	7,582	2,826	10,669	11,079	6,853
	S	NA	NA	NA	NA	NA
	GH	NA	NA	12,172	9,283	9,544
Gibraltar	PC	7,596	6,976	12,033	NA	12,275
	M	12,540	7,784	15,627	NA	11,811
	S	12,371	NA	7,907	5,018	7,842
	GH	NA	NA	13,550	10,661	10,922
Freetown (Sierra Leone)	PC	7,265	6,967	11,702	14,525	11,944
	M	10,919	6,163	14,006	14,416	10,190
	S	16,280	NA	11,816	8,927	11,751
	GH	16,122	NA	11,658	8,796	9,030

Panama Canal=PC
Magellan Straits=M
Suez Canal=S
Cape of Good Hope=GH

Source: Padelford, N. and Gibbs, S. 1975. Maritime Commerce and the Future of the Panama Canal.



Lessons Relating to U.S. History

Where People Are Moving: A Geography of Migration in the United States

GRADE: 6-8

SUBJECT: U.S. History

GEOGRAPHY THEMES: location, place, movement, human/environmental interaction, region

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Presenting Geographic Information, Interpreting and Analyzing Geographic Information

VOCABULARY: migration

OBJECTIVES: Students will:
1. gather data as to where they would most and least like to live
2. map data from a table on U.S. migration
3. analyze the patterns on the map and compare these with their own migration plans.

MATERIALS: table of data from U.S. News and World Report, blank map of the United States, completed map of migration trends 1980-1984.

LESSON DEVELOPMENT:

Review and Motivation:

1. Ask students where they would most and least like to live when they finish school. Compile the class results on the black board.

2. Ask students why they made these selections (job opportunities, climate, recreation, ties to family, etc.).

3. Tell the students that they are going to compare their future migration plans with how people in the United States have migrated (moved their residence) in the early 1980s. Tell the students that more recent data will not be available until the U.S. Bureau of the Census analyzes the returns for 1990. Did their families fill out a census form?

Activities:

1. Hand out the table of data on "Where People Are Moving" from U.S. News and World Report. Explain the data on the table, i.e. these data depict changes in the population of states that is due to migration. (Natural growth or decline because of births and deaths of the population in the state are not included.)

2. As a class follow the steps necessary to convert data on this table to a map.
   a. Array the data from highest to lowest. This has already been done.
   b. Divide the data into several logical categories. Four to five categories are preferred. Tell the students that this is the most difficult job in map making because too many or too few data categories will hide the patterns.

c. Use the following divisions to break the data into four groups:
*greater than 1.2% (large gain, greater than the national average)
*0.1 to 0.7% (slight gain)
*-0.2 to -0.8 % (slight loss)
*more than -1.0%.

d. Assign logical colors or patterns to each category (highest values should have the boldest pattern or darkest color).

e. Hand out blank U.S. maps and have students color the states with the appropriate color.

3. Ask the students what patterns they see. (Their maps should look like the completed one in this lesson.)

-What regions of the country gained the most through migration? (the West and South, often called the Sunbelt).
-What are the characteristics of these states that might draw people?
-Which regions lost the most people through migration? (the old Manufacturing Belt of Pennsylvania, Ohio, Michigan, Illinois, and Indiana; the mining states of West Virginia and Kentucky; the farming states of Minnesota, Iowa, South Dakota, and Nebraska).
-What are the characteristics of these states that would cause people to leave? (climate, poor job opportunities)
-What happened in Maryland?

4. Ask students about exceptions to the pattern. For example, why don't people move to Alabama and Mississippi? (perceived as poor and offering few opportunities) What happened to Oregon? (economic recession in the lumber industry) Why did New Hampshire gain? (perhaps because it has no state income tax)

5. Ask students to compare this map with their own future plans. Do they plan to live in a state that is also perceived favorably by other Americans? Have they chosen any states that did not experience migration growth in the early 1980s?

Conclusion:

Ask students what types of service problems (roads, sewers, schools, parks, etc.) might occur in areas of rapid population growth? in regions of declining population? What type of political changes might occur as a result of this process? What might happen to a state's representation in Congress? (The 1990 Census results will probably give the South and West additional representation while the Northeast and Midwest will loose.)

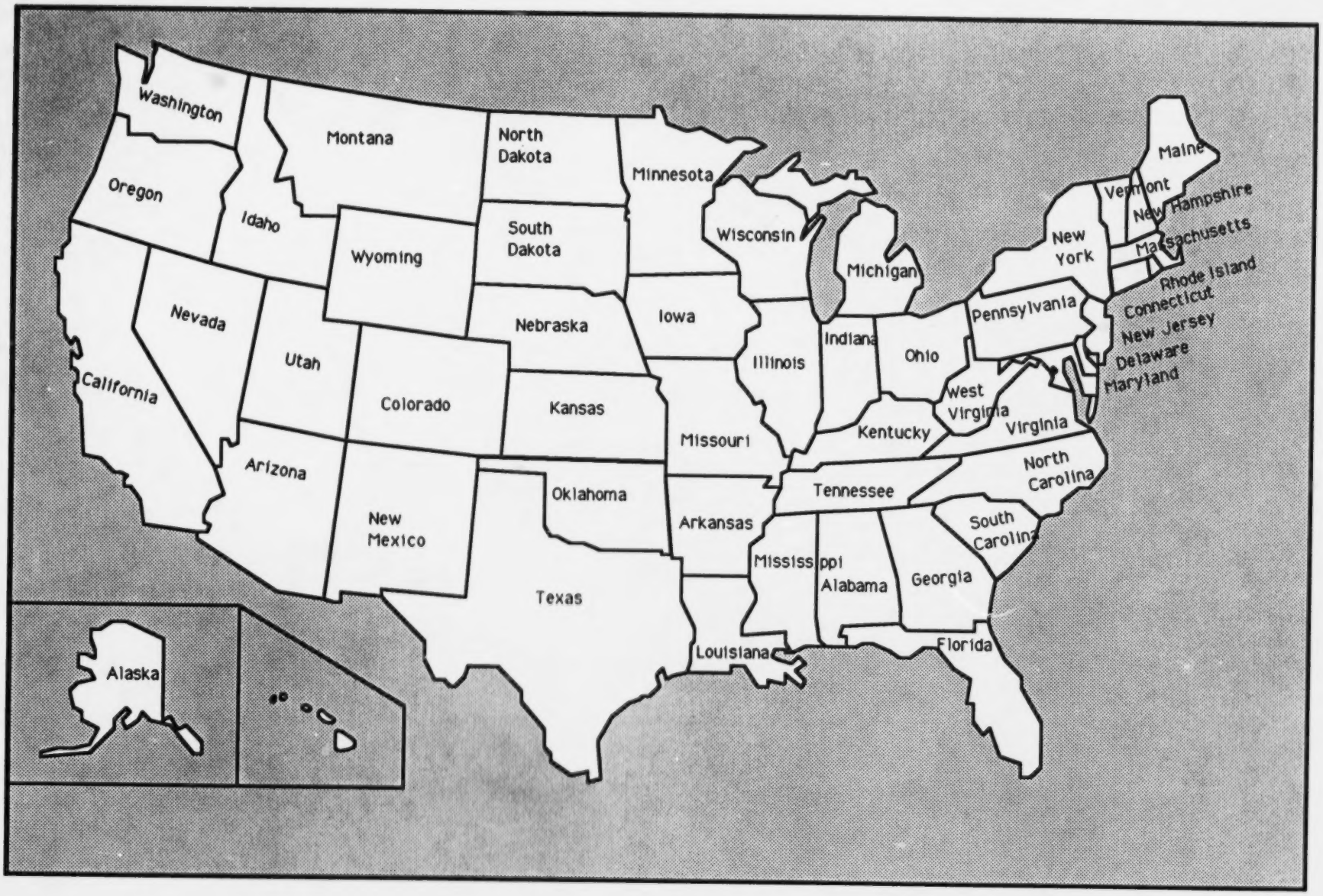
EVALUATION:

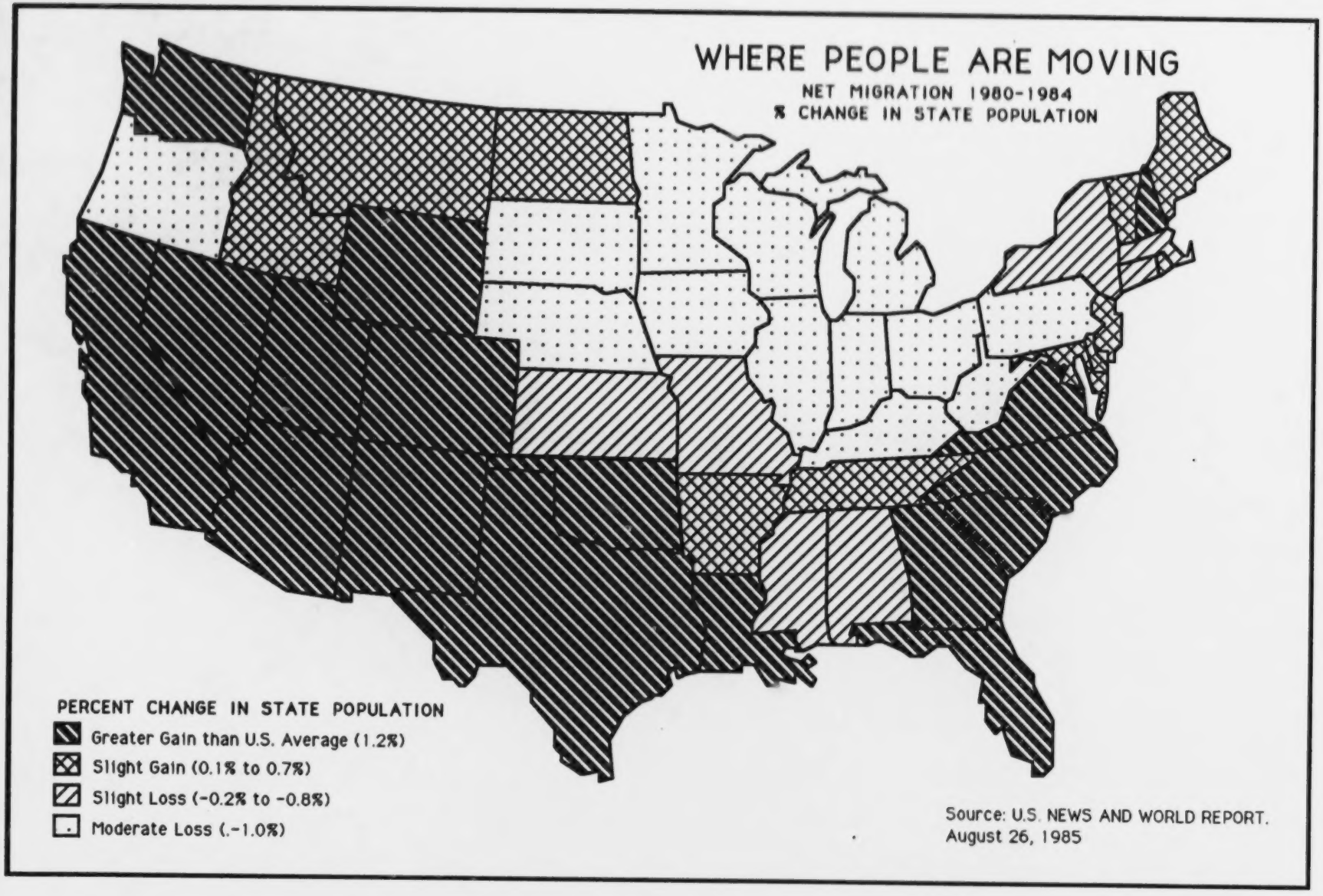
Have the students write a paragraph summarizing the pattern of movement of Americans during the early 1980s. Also ask them to predict what the migration patterns for the 1990s might be. Will they be similar or different? Why?

WHERE PEOPLE ARE MOVING, NET MIGRATION 1980-1984

State	Percentage Change Due to Migration	State	Percentage Change Due to Migration
Alaska	14.8	Montana	0.7
Florida	11.2	North Dakota	0.7
Nevada	9.6	Vermont	0.7
Arizona	7.6	Maine	0.6
Texas	7.1	Idaho	0.5
Oklahoma	5.3	Arkansas	0.3
Colorado	5.1	Maryland	0.3
California	4.1	New Jersey	0.3
Utah	3.6	Tennessee	0.3
New Mexico	3.4	Delaware	0.2
Georgia	3.3	Rhode Island	0.1
New Hampshire	3.3	Kansas	-0.2
Virginia	2.4	Alabama	-0.3
North Carolina	2.3	Connecticut	-0.3
South Carolina	2.2	Massachusetts	-0.5
Wyoming	2.2	Missouri	-0.5
Hawaii	1.8	Mississippi	-0.6
Washington	1.5	New York	-0.8
Louisiana	1.4	Kentucky	-1.1
U.S. AVERAGE	1.2	Nebraska	-1.1
		Pennsylvania	-1.1
		Minnesota	-1.4
		Oregon	-1.6
		South Dakota	-1.6
		West Virginia	-1.6
		Wisconsin	-1.7
		Illinois	-2.3
		Indiana	-2.7
		Iowa	-2.7
		Ohio	-3.1
		District of Columbia	-4.2
		Michigan	-4.9

Source: U.S. News and World Report, August 26, 1985.


Washington
Oregon
California
Idaho
Nevada
Montana
Wyoming
Utah
Arizona
Colorado
New Mexico
North Dakota
South Dakota
Nebraska
Kansas
Oklahoma
Texas
Minnesota
Iowa
Missouri
Arkansas
Louisiana
Wisconsin
Illinois
Michigan
Indiana
Ohio
Kentucky
Tennessee
Mississippi
Alabama
Georgia
Florida
South Carolina
North Carolina
Virginia
West Virginia
Pennsylvania
New York
Maine
Vermont
New Hampshire
Massachusetts
Rhode Island
Connecticut
New Jersey
Delaware
Maryland
Alaska


WHERE PEOPLE ARE MOVING
NET MIGRATION 1980-1984
% CHANGE IN STATE POPULATION
PERCENT CHANGE IN STATE POPULATION
Greater Gain than U.S. Average (1.2%)
Slight Gain (0.1% to 0.7%)
Slight Loss (-0.2% to -0.8%)
Moderate Loss (.-1.0%)
Source: U.S. NEWS AND WORLD REPORT.
August 26, 1985

All Work and No Play: Child Labor in the United States

GRADE: 6-8

SUBJECT: U.S. History

DURATION: 1 class period

GEOGRAPHY THEMES: location, place, movement region

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Interpreting and Analyzing Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: entrepreneurs, employers, employees

OBJECTIVES: Students will:
1. interpret cartoons and photographs related to child labor
2. analyze maps of child labor and describe spatial patterns
3. explain the advantages and disadvantages of child labor.

MATERIALS: cartoons and photographs of child labor; maps of the distribution of child labor in 1910 and 1920

LESSON DEVELOPMENT:

Background Teacher Information:

It was estimated that 2 million children under the age of 15 worked in agriculture, mines, factories, and sweatshops at the turn of the century. Actually, children had been a large part of the labor force for some time. As early as 1798, Samuel Slater operated his cotton mills in New England by hiring children from ages seven to twelve to work 12 to 15 hours a day.

Many textile mills eventually moved to the South in part to escape restrictions against child labor that were becoming more prevalent in the North in the early 1900s. Restrictions on child labor were largely left to the states, and progressive states such as Massachusetts, New York, Washington and Oregon began to pass such laws before the 1930s. In the South few such laws existed, and if they did they were not enforced. The mills offered new economic opportunities to the entire family. The whole family had often worked together on the farm, so it was logical that they would work together in the mill. Although six and seven year olds were hired, the great majority of mill workers were women and children between the ages of 10 and 15. Older children generally worked an average of 70 hours a week for a wage of about three dollars.

Children also worked in the fields and coal mines. Glass factories often hired young boys who worked close to the hot furnaces carrying newly blown glass bottles to a place for cooling. In cities young boys worked as bootblacks, newspaper peddlers, and messengers for the telegraph business. An investigation of the working conditions for the messengers found that some boys were on duty for 20 hours continuously. Some may have walked as many as 60 miles a day. Young boys and girls also often toiled next to their mothers in the canning factories and in tenement workshops.

Some states and the federal goverment tried to eliminate child labor in the early decades of this century. Opponents said that child labor was necessary to produce low cost products and make American industry competitive. The National Recovery Act of 1933 tried to prohibit child labor but the act was struck down by the Supreme Court. It was not until 1937 and the passage of the Fair Labor Standards Act that child labor was finally banned.

Review and Motivation:

1. Ask the students if they have older brothers and sisters who work while they are still in school. At what age do the students think they should be allowed to work?

2. Tell the students that if they had lived a 100 years ago they might have been working 10-12 hours a day when they were 10 years; some may have even worked when they were six or seven years old. Ask students what type of jobs do they think children would have held at that time?

Activities:

1. Have students look at transparencies of the two cartoons and ask them to explain the message of each. Notice that in each case the children seem to be oppressed by wealthy employers. Why were children used by these entrepreneurs? (cheaper than adult workers; used for jobs that machines would eventually do)

2. Next, show the photographs of children in the mills. Ask students to describe some of the details of the photos. Then ask how they feel about what the children are doing. (The little boy's name was Leo. He was eight years old and picked bobbins at the Elk Cotton Mills in Fayetteville, Tennessee. When asked if he helped his sister or mother in the mill he responded, "No, I don't help my sister or mother, just myself.") How do they think employers would have reacted to the publishing of these photographs in a newspaper (teaching them good work habits, teaching them a skill).

3. Hand out the maps of child labor 1910 and 1920. Have the students look at the map for 1910. Where was child labor found most? Why do they think it was concentrated in the South? What types of jobs would children have here? Read students the following passage describing life in a mill village in the South.

> At 4:45 A.M. the great mills shrieked their wake-up signals. The men, women, and children turn out of bed or raise from their mattresses on the floor, gulp down...handfuls of food, and leave the home for the mills. Sleepy, half-awake, drowsy girls, sleepy, yawning, half-dressed children, drowsy, heavy men and women, hurry along...to begin their twelve or more hours of continuous work.

Ask the students why they think the states of the Great Plains had higher rates of child labor than the states of the East.

4. Have students compare the 1910 and 1920 maps. What has happened? Why do they think child labor diminshed? (child labor laws, introduction of machinery that would do children's jobs) What states have almost no child labor by 1920?

Conclusion:

Ask the students to list three reasons why they think the employers wanted to keep child labor. List three reasons why child labor should have been eliminated.

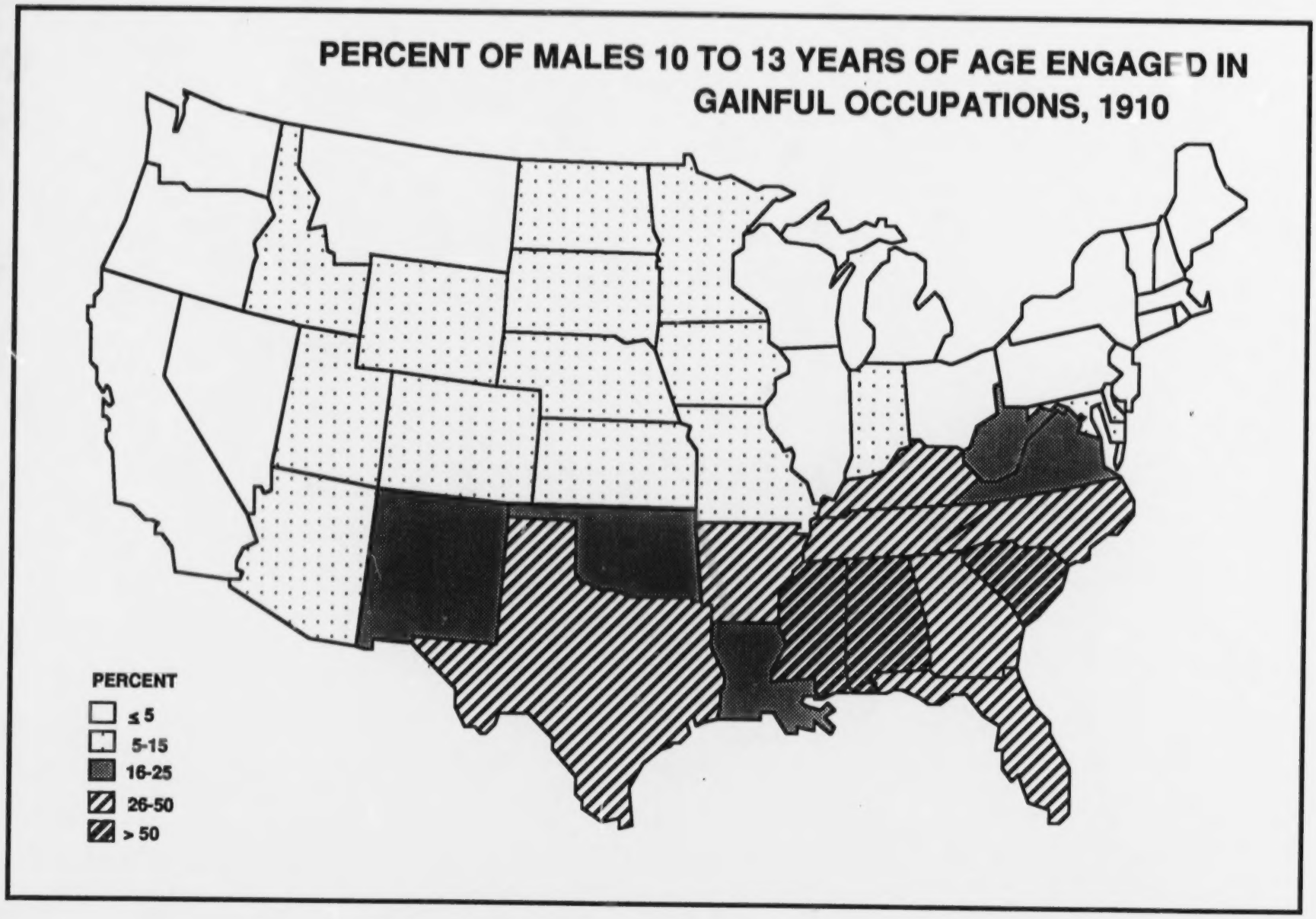
EVALUATION:

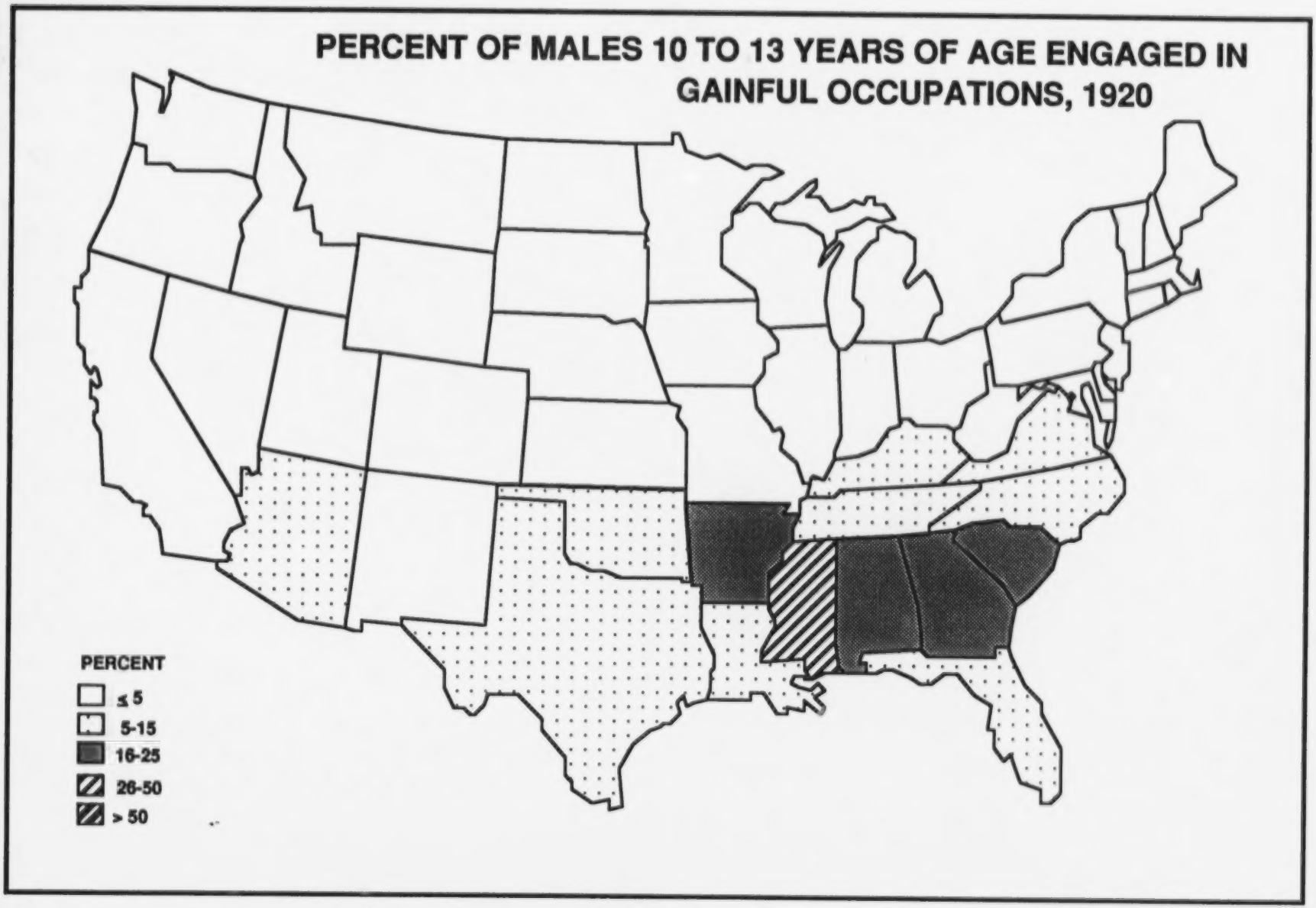
Ask students to predict what might happen if current child labor laws were weakened or repealed.

RESOURCES:

Photographs on child labor are available from Documentary Photo Aids, P.O. Box 956, Mount Dora, Florida 32757. The original photographs of the pictures contained in this lesson are found in the Photography Collection of the University of Maryland Baltimore County Library. They are reproduced here with permission.

Note: The guidance counselor should have a copy of existing child labor regulations. You may wish to obtain a copy in order to compare students' concepts of the regulations with what actually exists.


PERCENT OF MALES 10 TO 13 YEARS OF AGE ENGAGED IN GAINFUL OCCUPATIONS, 1910
PERCENT
≤ 5
5-15
16-25
26-50
> 50


PERCENT OF MALES 10 TO 13 YEARS OF AGE ENGAGED IN GAINFUL OCCUPATIONS, 1920
PERCENT
≤ 5
5-15
16-25
26-50
> 50

Escape Routes of the Underground Railroad

GRADE: 6-8

SUBJECT: U.S. History

GEOGRAPHY THEMES: location, place, human/environment, movement, region

DURATION: 1-2 class periods

SKILLS: Asking Geographic Questions, Presenting Geographic Information, Developing and Testing Hypotheses and Geographic Generalizations

VOCABULARY: Underground Railroad, "station", "conductor", "passenger", abolitionist

OBJECTIVES: Students will:

1. color code a map of the United States noting free and slave states
2. plot underground railroad escape routes on a map
3. explain why escape routes were located where they were
4. develop a hypothetical escape route
5. write a description of their escape route

MATERIALS:

-Petry, Ann (1989) "They Called Her Moses." In Adventures for Readers Book II, pp. 419-427, Orlando: Harcourt Brace Jovanovich, Inc., or appropriate reading that describes the Underground Railroad or prominent people involved (such as Harriet Tubman).
-Underground Railroad Routes Map
-Underground Railroad Worksheet
-Colored pencils or crayons
-Worksheet: Organizing an Underground Railroad Escape Route

LESSON DEVELOPMENT:

Review and Motivation:

1. Make a transparency of the picture of the train, show it to students, and ask them to label each of the unidentified parts.

2. Explain that these were code words (conductor, passenger, station) that identified places or people that were part of a secret organization called the Underground Railroad that helped slaves escape to the North just prior to the Civil War.

Activities:

1. Have students read story or description of the Underground Railroad. Ask how terms from motivating activity were used and what could be learned about the locations of the escape routes.

2. Distribute blank Underground Railroad Routes map.

3. Have students identify the free and slave states on the map and color each group of states with a different color. Have them create a key for the map.

4. Distribute Underground Railroad Worksheet and have the students plot the various escape routes on their maps. This may be done individually or by cooperative learning groups working together to read the worksheet and plot the routes.

5. Home assignment or follow-up cooperative learning assignment: Organizing an Undeground Railroad Escape Route (see attached).

Conclusion:

Have students analyze the maps by asking:

Where are the routes located? Why?

Where are the routes heading? Why?

What physical feature is associated with the escape routes? Why?

EVALUATION:

1. Assess map skills by monitoring students as they are completing the map and worksheet exercises. Also, completed maps can be collected and evaluated for accuracy.

2. Assess understanding of the role played by geography by collecting and evaluating the hypothetical escape route assignment, "Organizing an Underground Railroad Escape Route."

Organizing an Underground Railroad Escape Route

Directions:

Imagine that you are an abolitionist who wants to help the Underground Railroad. You have agreed to set up an escape route from Baltimore northward to New York City and then into Canada. You must work out a plan for this route to present to the local Underground Railroad committee. They want you to include the following information in your report:

a. What kinds of "stations" would you use along your route?

b. How large a group of slaves could you safely take with you at one time? How did you determine this amount?

c. When would you travel? Why?

d. How would you travel--boat, wagon, on foot? Why?

e. What supplies would you take with you? Why?

f. Explain how each of the following would affect your escape route?

rivers
woods
roads
towns
weather

Adapted from a lesson by Elizabeth Johnson.

Underground Railroad Worksheet

Directions: Read the following descriptions and plot the escape routes on the Underground Railroad Routes map.

The Underground Railroad was a name used to describe an informal network of abolitionists who helped guide runaway slaves fleeing to the North and Canada. The actual number of slaves aided by the Underground Railroad is uncertain. Some historians believe that as many as 75,000 "passengers" were helped to freedom.

Two major groups who aided the runaway slaves were the free blacks of the Northern states and the Quakers, a religious sect who believed that slavery was against the will of God. Large numbers of Quakers lived in Indiana, Ohio, and Pennsylvania where they set up very well organized escape routes to help get runaways into Canada. One such Quaker was Levi Coffin who was known as the "President of the Underground Railroad." A week seldom went by that Coffin did not receive passengers at his home. Every night he kept horses and a wagon ready to carry fugitive slaves further north.

Listed below are some of the more traveled routes used by the Underground Railroad. Read the stations for each route and plot them on your map.

1. From Charleston, South Carolina travel north by boat along the Atlantic coastline into Delaware Bay. Disembark at Philadelphia and continue by land northeast to New York City and then to New Haven, Connecticut.

2. From Norfolk, Virginia travel northeast to the Atlantic Ocean and travel north by boat, landing in Boston, Massachusetts; then travel by land north through Vermont to Montreal.

3. From New York City, travel north to Albany and then head west to Rochester and along the southern shore of Lake Ontario into Canada.

4. From Cumberland, Maryland travel north to Erie, Pennsylvania and from there by boat across Lake Erie into Canada.

Many routes started along the Ohio River and headed northward.

5. From Ironton, Ohio travel north through Columbus to the southern edge of Lake Erie. Travel west to Toledo and then northward to Detroit.

6. From Leavenworth, Indiana travel to Indianapolis and then northeast to Toledo.

Several important escape routes crossed Illinois. All of them converged or ended in Chicago along Lake Michigan.

7. From Cairo, Illinois travel north directly to Chicago.

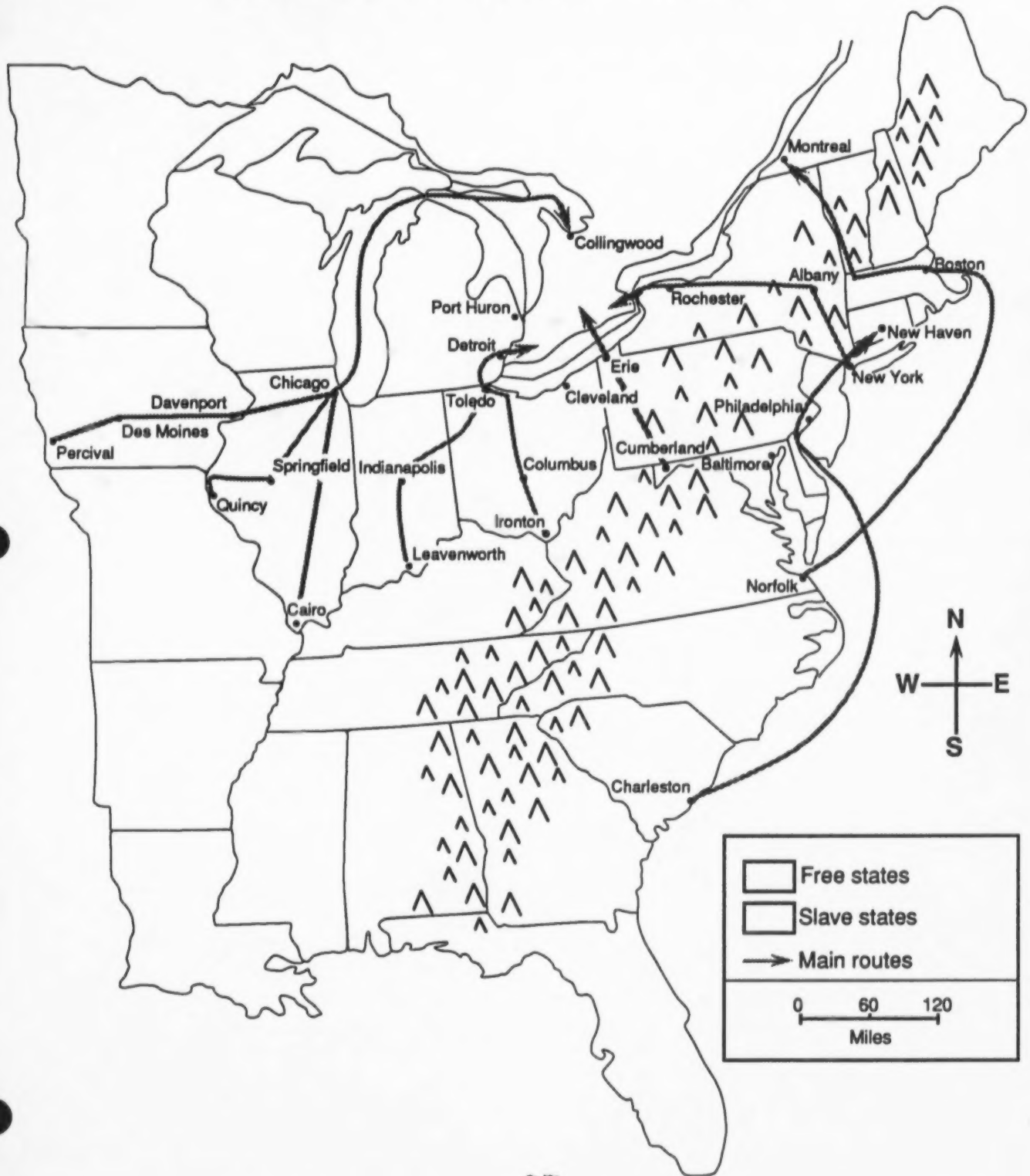
8. From Quincy, Illinois travel along the Missouri border and then due east to Springfield and from there northeast to Chicago. From Chicago, travel by boat through Lake Michigan into Lake Huron and disembark in Collingwood, Canada.

9. From Percival , Iowa travel northeast to Des Moines and then continue directly east to Davenport. Then travel east across Illinois to Chicago.

Once in the North, runaway slaves still were not safe. The Fugitive Slave Act made it possible for bounty hunters to travel into northern states to retrieve and return runaway slaves to their owners. Any person caught aiding fugitive slaves could be arrested.

UNDERGROUND RAILROAD ROUTES

UNDERGROUND RAILROAD ROUTES



Agricultural Regions of the Midwest

GRADE: 6-8

SUBJECT: U.S. History

GEOGRAPHY THEMES: human/environment interaction, regions

DURATION: 1 class period

SKILLS: Asking Geographic Questions, Acquiring Geographic Information, Presenting Geographic Information, Interpreting and Analyzing Geographic Information

VOCABULARY: isohyet, Corn Belt, Wheat Belt, Dairy Belt

OBJECTIVES: Students will:
1. map rainfall and temperature patterns on a map
2. create climatic and cultural regions.

MATERIALS: United States map of precipitation, blank U.S. map, maps of precipitation and climate, map of agricultural regions

LESSON DEVELOPMENT:

Teacher Background Information:

The Midwest region of the United States emerged as an important agricultural region due to productive soils and a climate conducive to agriculture. Although the Midwest is generally recognized as a cultural region, smaller regions within the area can be identified on the basis of the dominant agricultural crop. Crops have different ranges of moisture and temperature requirements for maximum productivity, and there is sufficient variation in climate to result in four crop regions: the Corn Belt, the Wheat Belt, the Dairy Belt, and an area categorized as General Farming.

Corn needs a long, hot summer and at least 30 inches of precipitation per year. Most of the corn grown in the Corn Belt is used to feed cattle and hogs so many farmers in the region also raise livestock.

Wheat can grow well in dry regions with about 20 inches of precipitation. Two types of wheat regions are found in the Midwest: the winter wheat area where winters are milder and wheat is planted in the fall, and the spring wheat area where winters are more severe and wheat is planted in the spring.

In parts of Minnesota, Wisconsin, and Michigan wheat and corn are replaced by hay and forage crops which do well where summers are short and cool. The crops are mainly used for feed for the dairy industry. In southern Missouri and Illinois the Corn Belt gives way to an area of mixed or general farming. In northwestern Nebraska and western South Dakota a combination of topography, poor soils and erratic precipitation result in livestock grazing as the dominant activity.

Climate and other natural factors have always exerted a strong influence on agriculture in the area. In particular, drought, hail, rain at the wrong time of the year and other natural events have caused lower crop yields and even failure of crops over large areas.

In recent years farmers in the Midwest have also been under economic strain from other sources, leading to the failure of many small and medium sized farms throughout the region. In 1986 it was estimated that more than 387 farms went out of business each day. The consequences of this trend extend beyond the immediate farm, affecting rural non-farm businesses also. In 1986, for example, 138 banks in the US failed and at least half

of these were agricultural banks. An understanding of the economic difficulties experienced by farmers can be illustrated by completing the enrichment activity which examines the costs of production, the return, and the net profits received by a typical farmer.

Review and Motivation:

1. Ask students to list the states they think make up the region known as the Midwest.

2. Ask students what types of crops are grown in the region (corn, wheat, hay). Are there any animals raised? (beef cattle, dairy cattle, hogs)

3. Ask students what factors they think farmers consider when deciding what crops to grow (temperature, moisture, profit).

Activities:

Note: teachers will have to carefully monitor the students as they work through the following steps.

1. Provide students with the map showing Average Annual Precipitation in the United States. Explain that the lines representing precipitation on the map are called "isohyets" and that the area between any two of the lines would have average annual precipitation somewhere between those two values. The area between the 10" and 20" lines, for example, receives anywhere from 10 to 20 inches of precipitation.

2. Have students draw a line on the precipitation map around the region referred to as the Midwest: North and South Dakota, Nebraska, Kansas, Missouri, Illinois, Indiana, Ohio, Wisconsin, Minnesota, Michigan, and Iowa.

3. Have students color in four precipitation areas in the Midwest using different colors : 10-20 inches, 20-30 inches, 30-40 inches, and 40-50 inches. Make a key for the map showing these four categories.

4. Have the students draw two lines across the Midwest dividing it into three temperature regions.

   a. The southern third of Missouri and the southern third of Illinois have long, hot summers and mild winters.
   b. The rest of Missouri and Illinois and the states of Nebraska, Kansas, Iowa, Indiana and Ohio have long, hot summers and short, cold winters.
   c. The northern region (the remaining states) has short, warm summers and very cold winters.

5. Have students outline the Midwest region on the blank map of the United States.

6. Have students use Table 1 (temperature and precipitation requirements for corn, wheat and hay) and their completed climate map to outline on the blank map the areas of the Midwest where corn, wheat and hay should dominate. Make a key showing the Corn Belt, the Wheat Belt, and the Dairy Belt (hay area).

7. Make a transparency of the attached map of agricultural regions. Show it to the students and have them compare their maps of agricultural regions to this one. Do the actual patterns of agricultural production agree with each student's map? (Corn agrees very well, hay region coincides with dairy region, wheat in western part where precipitation is lower. Unexpected is the livestock area in northwestern Nebraska and southwestern South Dakota which is related to landforms and soil.) One area will be empty. Ask students what might be grown there (transition zone where either corn or wheat might be found).

Conclusion:

1. Ask students to discuss what might happen when the price of corn or wheat falls. For example, do farmers in North Dakota have the option of switching to corn? Explain that variability in precipitation is a common feature of the Midwest and lower than normal precipitation occurs frequently.

2. Ask what other weather events might affect a farmer's crop yield (hail, tornadoes, too much rain during planting or harvesting season, late freezes in the spring). Insect infestations and crop diseases can also be weather related.

3. Ask students to think of other factors that might affect a farmer's yields. (Profit is also dependent on the costs of agricultural inputs such as fertilizer, insecticides and pesticides, fuel expenses, labor, and machinery purchase and repair. Finally, profit for the farmer is dependent on the price received for the product.)

EVALUATION:

Have the students examine another region of the country and using the precipitation map suggest what farmers might grow there.

Table 1. REQUIREMENTS FOR CORN, WHEAT AND HAY

CROP	CLIMATE	PRECIPITATION
corn	long, hot summers	30-40 inches
winter wheat	short, cold winters	15-20 inches
spring wheat	very cold winters	15-20 inches
hay	short, cool summers	30-40 inches

Enrichment Activity:

1. Ask students to make a list of all the things a farmer would need to purchase in order to grow a crop such as corn.

2. Ask students what usually happens to the price of goods over several years. Is it reasonable to assume that the price of corn and other agricultural products would also increase?

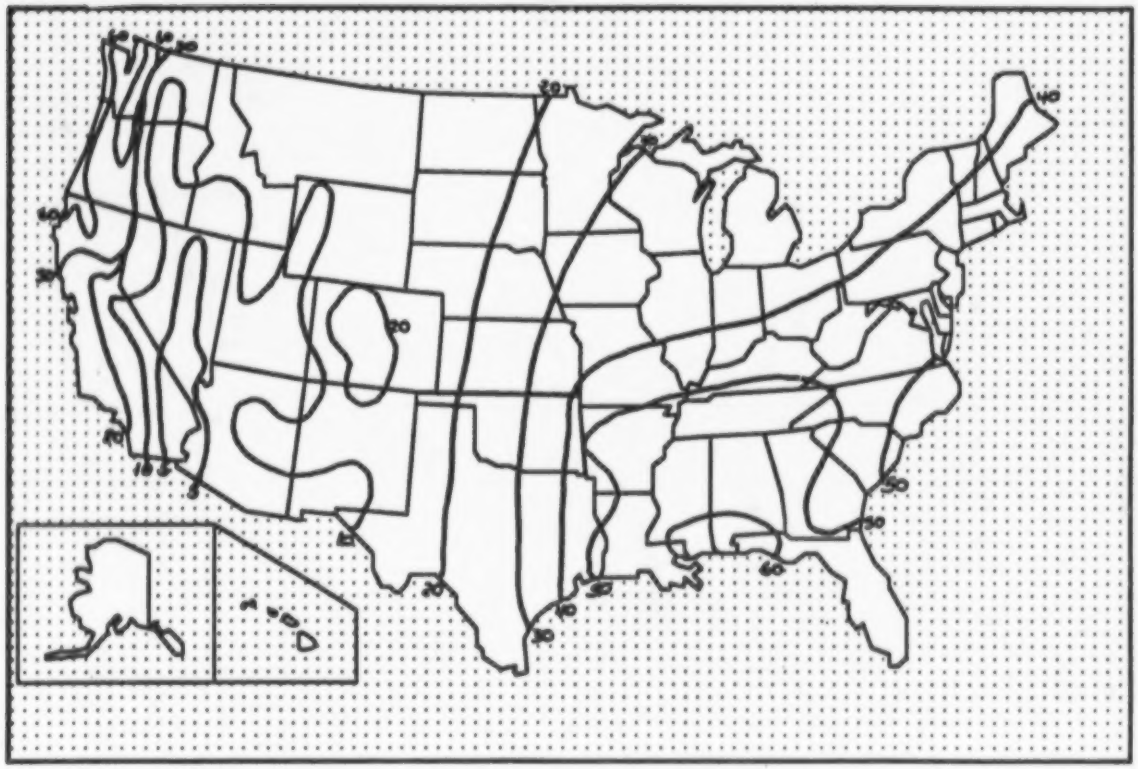
3. Show the graph of corn prices and ask the class to suggest how these fluctuations might influence profit for the farmers.

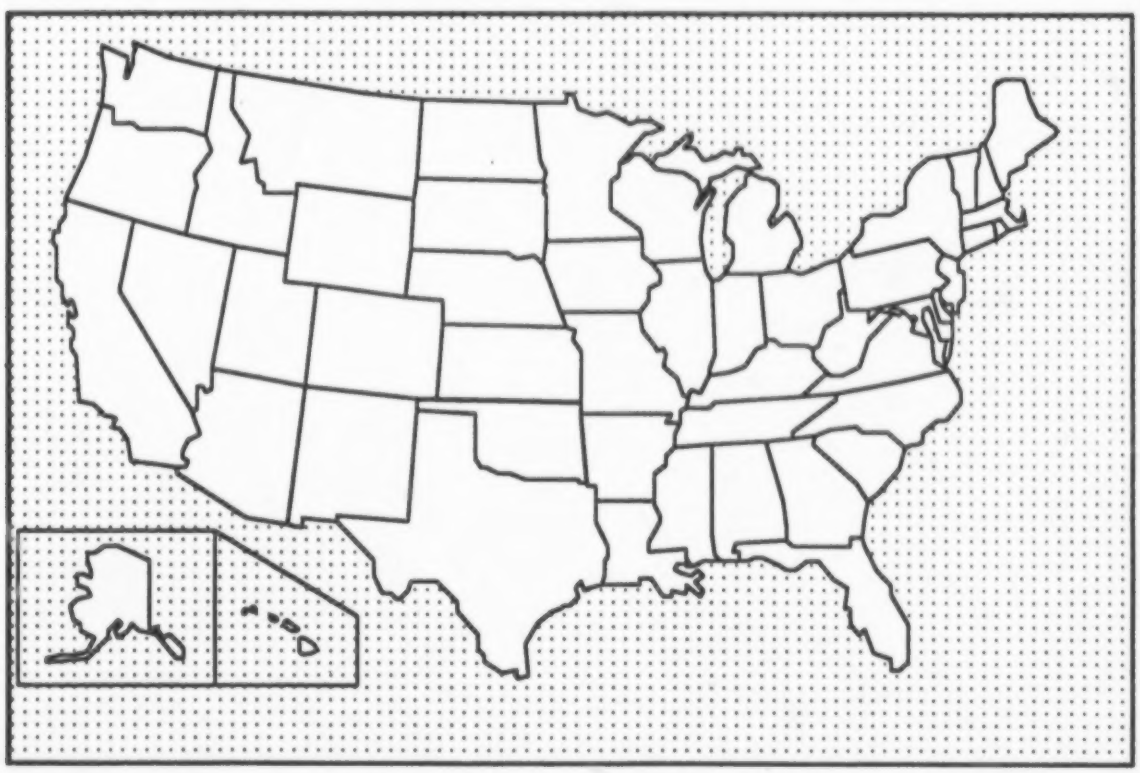
4. Have the students complete the worksheet to estimate production costs and sale prices for corn and beef and then estimate an individual farmer's net profit in 1986 (good yield, low price).

5. Have the students complete a similar worksheet with different values for the cost of corn per bushel and the yield per acre (poor yield, high price).

Adapted from a lesson by Stuart Davis.

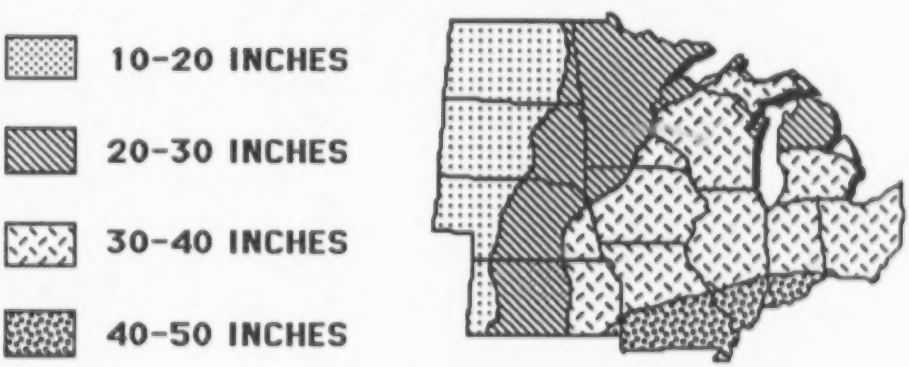
AVERAGE ANNUAL PRECIPITATION



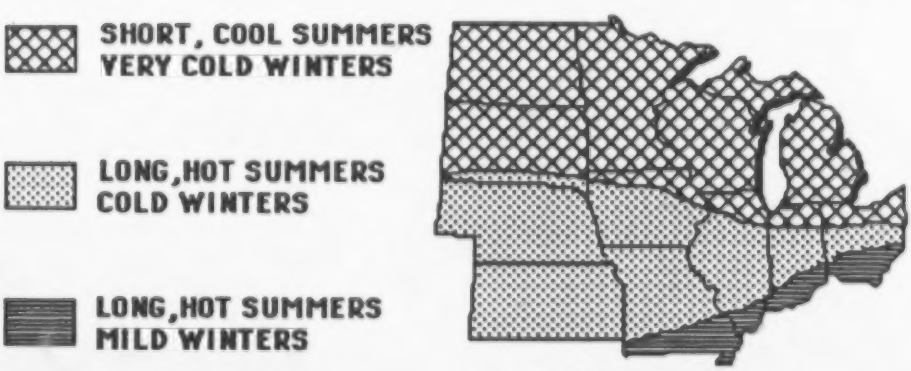


STATES AND RIVERS OF THE MIDWEST

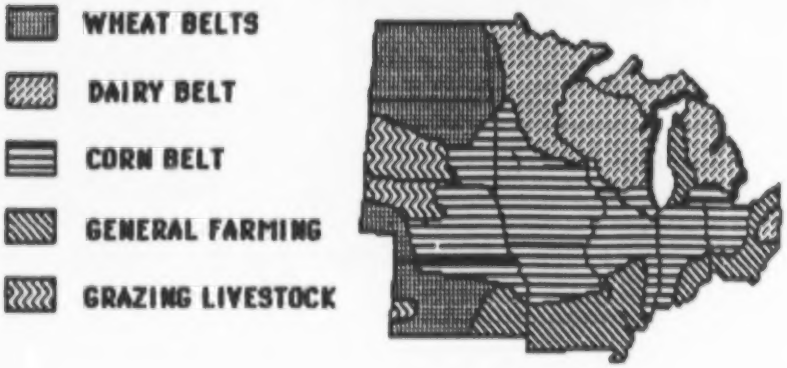
PRECIPITATION MAP OF THE MIDWEST



CLIMATE MAP OF THE MIDWEST



FARMING IN THE MIDWEST



Farmer Brown has a medium sized farm in Iowa. In 1986 he grew 500 acres of corn which he sold as feed grain. 1986 was good growing season for Iowa farms, the corn yield was 135 bushel per acre. The value of a bushel of corn in 1986 was $1.41. Farmer Brown also sold 50 steers for slaughter. The value of a steer sold for slaughter in 1986 was $391.

Total Yield:____ acres X _____ bushels/acre = _____ bushels

Receipts from corn: _____ bushels X _____ / bushel = $_____

Receipts from steers: _____ steers X $_____ /steer = $ _____

Receipts from corn $_____ + Receipts from steers $ _____ = $_____ Total Receipts

Total Receipts $_____
Total Production Costs $_____

Subtract Total Production Costs from Total Farm Receipts to find Total Net Profit:
$_____

Production Expenses

Livestock feed	$16,000
Livestock purchased	$12,000
Seed	$ 3,000
Fertilizer	$ 5,400
Pesticides	$ 4,600
Fuel	$ 4,400
Electricity	$ 2,400
Repairs and maintenance	$ 6,500
Contract labor	$10,700
Real estate interest	$ 8,200
Other expenses (transportation, storage, marketing, machine hire)	$14,100

TOTAL PRODUCTION COSTS _____

Farmers' incomes are variable due to both natural and economic conditions. In 1983 the average yield per acre for corn was only 87 bushels but the average price per bushel was $3.25. Keeping other costs constant calculate the net profit for the same farm.

Total Yield:____ acres X _____ bushels/acre = _____ bushels

Receipts from corn: _____ bushels X _____ / bushel = $_____

Receipts from steers: _____ steers X $_____ /steer = $ _____

Receipts from corn $_____ + Receipts from steers $ _____ = $_____ Total Receipts

Total Receipts $_____
Total Production Costs $_____

Subtract Total Production Costs from Total Farm Receipts to find Total Net Profit:
$_____

Farmer Brown has a medium sized farm in Iowa. In 1986 he grew 500 acres of corn which he sold as feed grain. 1986 was good growing season for Iowa farms, the corn yield was 135 bushel per acre. The value of a bushel of corn in 1986 was $1.41. Farmer Brown also sold 50 steers for slaughter. The value of a steer sold for slaughter in 1986 was $391.

Total Yield: 500 acres X 135 bushels/acre = 67,500 bushels

Receipts from corn: 67,500 bushels X 1.41 / bushel = $95,175

Receipts from steers: 50 steers X $391 /steer = $ 19,550

Receipts from corn $95,175 + Receipts from steers $ 19,550 = $114,725 Total Receipts

Total Receipts $114,725
Total Production Costs $87,300

Subtract Total Production Costs from Total Farm Receipts to find Total Net Profit:
$27,425

Production Expenses

Livestock feed	$16,000
Livestock purchased	$12,000
Seed	$ 3,000
Fertilizer	$ 5,400
Pesticides	$ 4,600
Fuel	$ 4,400
Electricity	$ 2,400
Repairs and maintenance	$ 6,500
Contract labor	$10,700
Real estate interest	$ 8,200
Other expenses (transportation, storage, marketing, machine hire)	$14,100

TOTAL PRODUCTION COSTS $87,300

Farmers' incomes are variable due to both natural and economic conditions. In 1983 the average yield per acre for corn was only 87 bushels but the average price per bushel was $3.25. Keeping other costs constant calculate the net profit for the same farm.

Total Yield: 500 acres X 87 bushels/acre = 43,500 bushels

Receipts from corn: 43,500 bushels X 3.25 / bushel = $141,375

Receipts from steers: 50 steers X $391 /steer = $ 19,550

Receipts from corn $141,375 + Receipts from steers $ 19,550 = $160,925 Total Receipts

Total Receipts $160,925
Total Production Costs $ 87,300

Subtract Total Production Costs from Total Farm Receipts to find Total Net Profit:
$73,625

CORN PRICES PER BUSHEL